THE IMPACT OF COHESION ON GROUPTHINK

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Abstract

The purpose of this study was to explore the impact of cohesion level on the occurrence of groupthink. Janis`s (1982) Groupthink model was utilised as the theoretical framework for this research.

Fifteen subjects participated in the study. Subjects were randomly selected from advertisements. They comprised of both males and females. Participants were divided into three groups. These groups were created to assess different levels of cohesion. Members of group one had an eight month history of interactions and were categorised as the High Cohesion Group. The remaining subjects were randomly placed in either group two or three respectively. None of these subjects had prior interactions and were categorised as the Low Cohesion Group and Non Cohesion Group.

The methodology for this research was of a qualitative nature. It involved the application of two questionnaires. The first was the group questionnaire, which was designed to determine group cohesiveness. It was aimed at investigating the initial cohesiveness of the groups, changes in group cohesion levels, and the effect of cohesion on group interaction. The questionnaire was administered a total of three times to group one and group two, and once to group three. Because the impact of the discussion topic on groupthink was significant for the purpose of this study, the groups generated their own discussion topics. This allowed subjects to develop topics which were of relevance to them. The second questionnaire was administered at the completion of the research. Its objective was to determine subjects' familiarity with the topics chosen.

Data was also collected from the transcripts of videos. This provided an indepth group analysis for symptoms of groupthink. The results found that low levels of cohesion evoked more groupthink symptoms than did high cohesion levels. These findings were in contrast to Janis (1982) Groupthink model. Furthermore, this research only found support for four of Janis (1982) Groupthink symptoms.

CHAPTER 1
Literature Review

As human beings we are social creatures. Throughout our lives, both work and play are spent interacting with other people. There are few occasions where we do not take part in some form of daily group activity, whether it be talking on the telephone or chatting to the postman.

The relationship of the individual to 'the group' has been a topic of debate amongst social scientists for centuries. A reason for this is that group participation plays a significant role in the lives of us all. Of interest for the present research, is the idea that group action reflects the equal involvement of all group members. However, in reality this often is not the case. Take a group decision making process, for example. One of the basic functions of this process is to decide on a course of action. Although it is assumed that all members of the group are equally involved in the group decision process, group dynamics heavily influence the likelihood of this occurring.

Despite an abundance of literature, the process of decision making still remains ambiguous. Often attention is drawn to the decision processes of a group only after that group has made a badly flawed decision. So why does a group make an unsuccessful decision? What group characteristics influence decision quality? How does the material under discussion impact on group processes? To answer such questions the issue of group dynamics must be explored. In particular, we need to know the factors which influence how a group makes a decision.

The literature for the present study will begin with an overview of what a group is, and then move on to a discussion of groupthink, one of the most

frequently cited theories of faulty decision making. The theory of groupthink will be defined and previous research on the topic addressed. The concept of cohesion, which is considered a major part of the groupthink theory, will be discussed along with some research about it's relevance to groupthink. The importance of the issue under discussion by the decision making group will be analysed, and the limitations of previous research outlined. Finally the rationale for the present study will be presented.

1.1 WHAT IS A GROUP?

One of the clearest definitions of the concept of a group, is that of Forsyth (1990) who defined it as comprising *"two or more interdependent individuals who influence one another through social interactions"* (Forsyth, 1990, p. 7). Turner (1987) defined a psychological group as *"one that is psychologically significant for the members, to which they relate themselves subjectively for social comparison and the acquisition of norms and values"* (Turner, 1987, p.1).

A number of characteristics distinguish a group from a random collection of people. Firstly, a group has its own identity, separate from the identity of its members (Fisher, 1974). This feature is demonstrated by the nature of some groups to continue as an entity, despite changes in their membership. Secondly, identification with a group is important for both its members and non members (Brilhart, 1967, in Fisher, 1974; Turner, 1987). A third essential feature of group membership is communication. Without some form of interaction between group members a group cannot exist. Such interactions are often tempered by the status of the individuals within the group, as well as by the goal of the group (Forsyth, 1990). Fourthly a group is a dynamic entity, which changes with time and circumstance.

1.1.1 What Are Groups Used For?

Researchers argue that groups are preferable to individuals for decision making purposes. A common explanation for this assumption derives from the "two heads are better than one" approach. This view assumes that decision quality will be enhanced by the input of more than one person (Dunnette et al., 1963; Forsyth, 1990). Stocker-Kreichgauer (1982) argues that the collective interests of group members result in an increasingly outcome orientated approach to decision making. As a consequence, group decision making appears more rational than that of the individual.

Furthermore group decision making provides a range of experiences and skills with which to resolve the problem at hand. By representing a variety of individuals the ability of the group to provide a fair and equitable result is increased. Burton (1990) suggests that group involvement leads to a greater understanding of the outcome of the decision making process (Fisher, 1974; Maier, 1967; Stasser, 1991; Wexley & Yukl, 1984).

Alternatively, the comparison of the group to the individual in the decision making process is viewed by some researchers as unnecessary. Although a group is not necessarily preferable to an individual, groups are of value for some decisions. The nature of the task should determine whether a group or individual is chosen (Fisher, 1974).

Furthermore groups may also fail in the decision making process if group membership encourages the group members to take more risks than would an individual. This is known as the risky shift phenomenon (Fisher, 1974). In addition groups may diffuse responsibility (Fisher, 1974), allowing individuals to avoid the blame for failure.

Groups are sometimes required to make momentous decisions, and at times make errors during the decision making process. Some famous examples of situations where a group made a poor decision include the space shuttle Challenger launch (Esser & Lindoerfer, 1989; Moorhead, Ference & Neck, 1991); the Cuban missile crisis (Herek, Janis & Huth, 1987; Janis, 1982); the trial of John DeLorean (Neck & Moorhead, 1992); the United States attempt to rescue hostages in Tehran (Smith, 1984); and the Korean War, Pearl Harbour, and the escalation of the Vietnam War (Janis, 1982). The unfortunate outcome of the decisions made in each of these cases has been linked not to incompetent or stupid people making the decisions, but to the processes involved in reaching the decision.

The decision making procedures used in these examples have been critiqued by several authors, including Janis (1982; Janis & Mann, 1977). Janis could not understand how groups consisting of intelligent and capable people could make the decisions they made with the information they had available. He studied some of these poorly made decisions and concluded that there were several factors that these decision making groups had in common. He then developed a theoretical model he called "Groupthink". This model has been a pervasive force in group research, but has found limited support.

1. 2 GROUPTHINK

Groupthink is a concept which was developed by Janis and has not ceased to be a source of controversy. It is a concept which Janis defined in 1982, and it is this definition which is used here. He referred to

> a mode of thinking that people engage in when they are deeply involved in a cohesive ingroup, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action. (Janis, 1982, p. 9)

Groupthink was described by Janis in an attempt to explain why groups consisting of intelligent people with appropriate skills and knowledge had made errors while making important decisions. Examples of such situations were President Truman's advisory group who supported the escalation of the Korean War, President Kennedy's group of advisers who supported the Bay of Pigs invasion, and the group who advised President Johnson to escalate the American involvement in the Vietnam War (Janis & Mann, 1977).

1.2.1 Janis' Theoretical Analysis Of Groupthink

Janis (1982; Janis & Mann, 1977) created a model of the groupthink theory that contained both antecedent conditions and observable consequences. The theoretical model used here (see Figure 1) is taken from Janis (1982).

1.2.1.1 Antecedent Conditions

Janis's (1982) theoretical model of groupthink contains three major antecedent conditions. The first is that decision makers must constitute a cohesive group. Janis (1982) defined cohesion as *"The high degree to which the members value their membership in the group, and want to continue to be affiliated"* (Janis, 1982, p. 245). Other definitions of cohesion are discussed at length in section 1.3.1.

The second antecedent condition of groupthink is that the organization will contain structural faults. Janis listed four faults. First the insulation of the group from external influences reduces the information and feedback available to the decision makers. It also prevents non group members from having an input in the decision. Secondly a lack of impartial leadership can lead to a discussion dominated by the leader, where the leader's opinion may be the only one given serious consideration. Often in groups where the leader has stated a preferred option there will not be a consideration of any other alternative. To consider another option could be considered an attack against the status of the group leader. The third structural fault Janis (1982) identified was a lack of properly defined procedures against using inadequate decision making methods. Fourthly a group may be composed of individuals who are so similar that the group may be redundant.

The third type of antecedent conditions are those which create a provocative situational context. They include a situation where the decision making group is under high stress to make a decision with few alternative solutions to that of the group leader. The stress factor is often a shortage of time in which to make an important decision. An example is when President Kennedy and his advisers had twenty four hours to make a decision that could have precipitated World War Three. Another type of provocative situation for groupthink occurs when a group suffers from a temporary loss of self esteem. This can be preceded by recent failures of the group, which make the group acknowledge its shortcomings.

Other provocative contexts include excessive difficulties with current decision making tasks, and moral dilemmas such as the only available solution violating the ethical or moral standards of the group.

THEORETICAL ANALYSIS OF GROUPTHINK

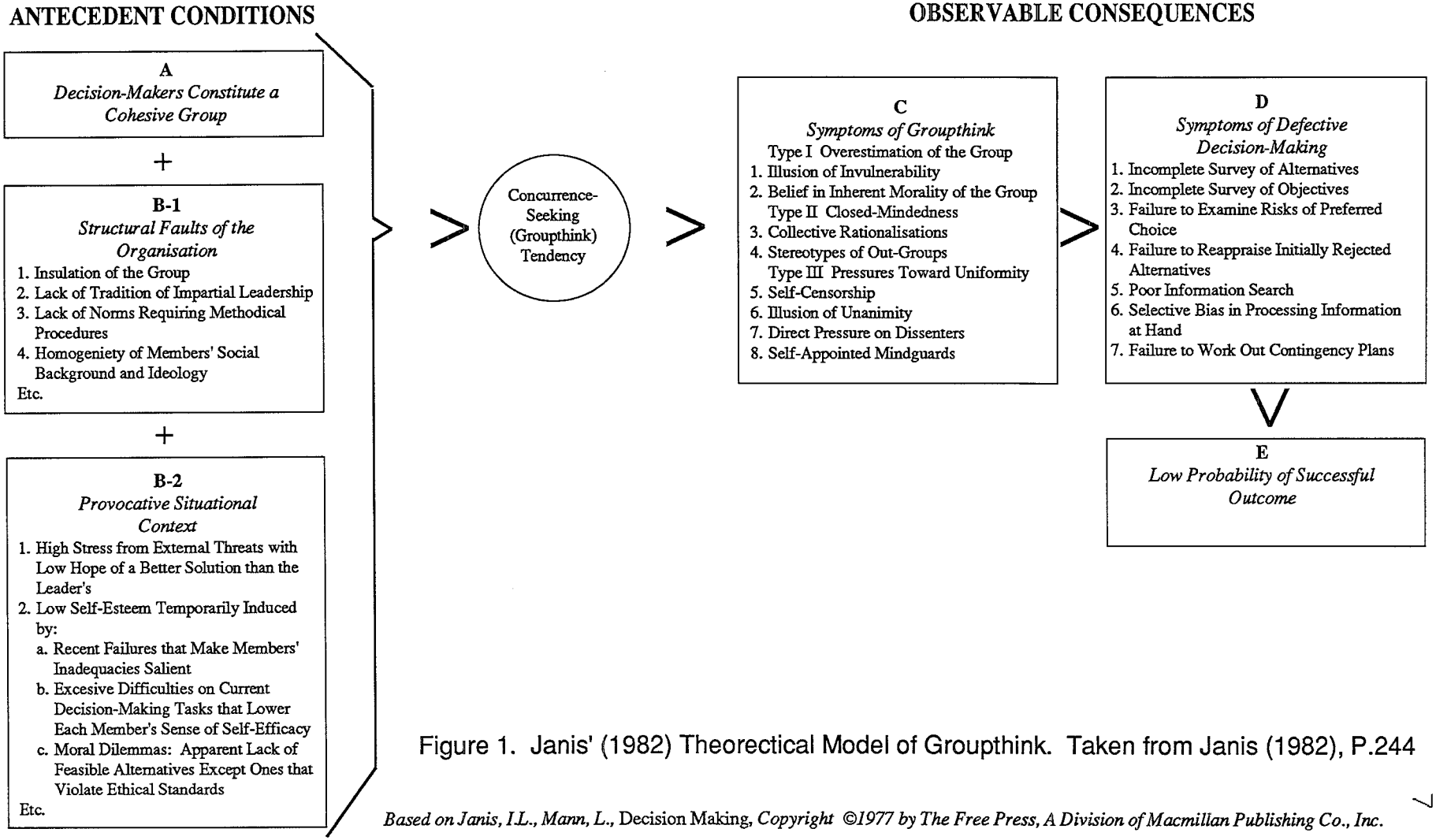

Figure 1. Janis' (1982) Theorectical Model of Groupthink. Taken from Janis (1982), P.244

The presence of these three antecedent conditions within a decision making group were considered by Janis (1982) to precede "groupthink". However the existence of these conditions did not necessarily condemn the group to errors in the decision making process. The existence of one antecedent without the others is not enough for groupthink to occur, which is why cohesion is considered a *"necessary but not sufficient"* condition for the groupthink phenomenon (Janis, 1982, p. 245).

1.2.1.2 Observable Consequences Of Groupthink

The observable consequences of groupthink can further be divided into three categories; the symptoms of groupthink, the symptoms of effective decision making, and the low probability of a successful outcome.

1.2.1.2.1 Symptoms Of Groupthink

Groupthink symptoms are categorised into three types. These are the over-estimation of the group, closed-mindedness, and pressures toward uniformity. In all cases the quotations in the following section are from Janis (1982, p. 174 and p. 175).

The over-estimation symptoms of groupthink include the illusion of invulnerability and belief in the inherent morality of the group. Janis (1982) defined the illusion of invulnerability as being "*shared by most or all of the members*" and it "*creates excessive optimism and encourages taking risks by group members*". Here, the group considers itself too powerful to be threatened by outsiders or outside events and believes that any decision it makes will not adversely affect this power. The group is considered untouchable and immune to failure. The inherent morality of the group is an

"*unquestioned belief*" held by the group members, which acts by "*inclining the members to ignore the ethical or moral consequences of their decision*". The group considers their goal to be worthy of any sacrifice, and ethical or moral issues will not stand in the way of the group decision.

There are two symptoms of groupthink which involve the closed-mindedness of group members. Collective rationalization *"to discount warnings or other information that might lead the members to reconsider their assumptions before they re-commit themselves to their past policy decisions"* involves a rejection of negative information. Any information which should lead the group to reconsider their decision is somehow justified by group members to make it seem invalid, wrong, or irrelevant.

The second symptom of closed-mindedness is an extension of everyday stereotyping behaviour. Thus Janis' (1982) defined the stereotyping of outgroup leaders "*as too evil to warrant genuine attempts to negotiate, or as too weak and stupid to counter whatever risky attempts are made to defeat their purposes*". The natural and often accurate human tendency to categorise people, and then place on them stereotyped attitudes based on this categorisation, is used by the decision maker to their own advantage. By taking this view, the opinions, attitudes and possible responses of both the outgroup and its leader can be ignored. This permits the ingroup to act as they wish without considering that their decision will be affected by the actions of others who may successfully prevent the enactment of their plans.

The third type of groupthink symptom is the pressure for individual group members to conform to the group opinion, in an attempt to gain uniformity. There are four forms of pressure toward uniformity including the self

censorship of deviations, a shared illusion of unanimity, direct pressure, and mindguarding.

Individuals display self censorship behaviour when they knowingly withhold information from the group due to of self-doubt. Janis (1982) states this is "*reflecting each members inclination to minimise to himself the importance of his doubts and counter-arguments*". Often a group member will hold great misgivings about a group decision but, usually because the other group members seem to be in agreement, they do not raise these doubts. Consequently the individual reasons to themselves that as they are the only dissenter, then they must be wrong.

A shared illusion of unanimity "*concerning judgements conforming to the majority view (partly resulting from self censorship of deviations, augmented by the false assumption that silence means consent)*" frequently follows on from the self censorship of deviations. These last two symptoms are very closely related, but either can occur without the other. The shared illusion of unanimity can occur even when more than one member disagrees with the apparent group unity, if those members do not verbalise these concerns.

Direct pressure is applied to "*any member who expresses strong arguments against any of the group's stereotypes, illusions, or commitments.*" Group pressure is used to maintain the collective interest. It is common for groups to pressurise members who criticize the groups assumptions or decisions. This can involve a personal attack on the deviant rather than a criticism of the opinion expressed, and usually originates from a powerful group member.

The final symptom of groupthink is the emergence of self-appointed mindguards who are *"members who protect the group from adverse information that might shatter their shared complacency about the effectiveness and morality of their decisions".* These mindguards may agree with the dominant position of the group, but be aware of information which could cast doubt on its suitability. They do not reveal this information to the group because they do not want to give any opening for dissent. The process differs from direct pressure and self censorship, in that mindguards do not suppress others' views, or their own beliefs, but instead suppress information of which they are aware, but with which they disagree.

1.2.1.2.2 Symptoms Of Defective Decision Making

As well as the eight symptoms of groupthink, Janis' (1982) model also includes seven symptoms of defective decision making. They occur as the outcome of the behaviours listed above.

Firstly there may be an incomplete survey of alternatives, which means that only one or two courses of action are discussed and no real attempt is made to uncover any more. Secondly an incomplete survey of the groups' objectives may result in the group not achieving its intended goal. Third is a failure to examine the risks of the preferred choice, where the pitfalls of the most commonly preferred alternative may not be assessed to determine if it is the optimal course of action. Fourth is the failure to reappraise initially rejected alternatives, particularly in the light of the risks of the preferred option. Fifth, a poor information search is undertaken, resulting in a deficit of relevant information. Sixth a selective bias in processing information at hand can lead to insufficient consideration being given to any negative information

which is uncovered. Finally, there is a failure to work out any contingency plans, in case the preferred course of action fails.

1.2.1.2.3 Low Probability Of Successful Outcome

The low probability of a successful outcome is extremely probable in the presence of the above antecedents, and at least some of the above symptoms. Janis (1982) theorised that groupthink could be avoided if certain procedures were used, most of which involved preventing either the antecedents or the symptoms of groupthink developing within a decision making group. It is not the purpose of this paper to fully discuss the prevention of groupthink however, but to ascertain whether Janis' theory gains empirical support.

1.2.2 Janis' Examples Of Groupthink

In justifying the existence of his concept, Janis (1982; Janis & Mann, 1977) pointed to famous examples where groups of intelligent people made poor decisions. In all cases, Janis used badly flawed political decisions, and in all cases he assumed that the resulting fiasco was caused by the decision making procedures used by the group. Likewise Janis' theory was also flawed.

First, Janis (1982; Janis & Mann, 1977) used hindsight to support his theory. It could be said he used mindguarding himself. Secondly he did not perform any experimental study to test his theory. He cites several events that occurred naturally without any experimental controls. The examples he used may have been accidents of nature, as there are certainly other occasions where, although it would have been expected, groupthink did not occur.

Thirdly he had to rely on official documents, interviews and the like, which are biased accounts of events and may gloss unflattering over details. Further, by using naturally occurring events, Janis failed to have any experimental control.

Janis (1982) mentions several examples of groupthink impaired political decisions, but there are four to which he most frequently returns. They are the fiascoes which occurred at the Bay of Pigs, in North Korea, Pearl Harbour and Vietnam.

President Kennedy and his advisers, despite much evidence which should have prevented the action, attempted to invade Cuba in 1961, resulting in the death and capture of many of those who landed at the Bay of Pigs. President Truman and his advisers continued the war in North Korea, despite warnings about the outcome of such action from the Chinese. The attack on Pearl Harbour occurred with plenty of warning, but the decision makers who should have acted, failed to do so because they did not believe their equipment. President Johnson and his advisers increased the United States involvement in the Vietnam War despite evidence that this action was unlikely to be successful.

In addition Janis (1982) also examined other examples of the groupthink theory. These included Watergate, President Ford's attack on Cambodia in 1975, President Reagan's reduction in Social Security benefits in 1981, Neville Chamberlain's inner circle and their attempt to appease Hitler in 1938 and 1939, President Carters' decision to rescue American hostages in Tehran in 1980, and the French disbelief of warnings of German invasion in 1914. Of significance is Janis's perception that groupthink is not only a political issue, but may also occur in executive decision making in "*a wide*

variety of group decisions on vital issues" (Janis, 1982, p. 197). Janis stressed the need for laboratory studies based on his theory, but such work has not provided confirmation of the theory. The research will now be assessed in terms of its support of the groupthink theory.

1.2.2.1 Studies Supporting Groupthink

Research which has provided complete support for groupthink has been in the form of case studies similar to those used by Janis. Smith (1984) concluded that all eight symptoms of groupthink could be seen in the fiasco surrounding the United States attempt to rescue hostages from Tehran. He supported the existence of all eight groupthink symptoms. Moorhead, Ference and Neck (1991) similarly reviewed the space shuttle Challenger launch, and found that all of the antecedent conditions and all of the groupthink symptoms were present within the group which made the decision to launch the shuttle.

While these two studies are the only ones to fully support all eight groupthink symptoms, other studies provide evidence of at least some. Hensley and Griffin (1986) found support for all groupthink symptoms except the illusion of unanimity in the Kent State University gymnasium controversy. Manz and Sims (1982) used three case studies to assess the value of groupthink, and claimed support for direct pressure, the illusion of unanimity, self-censorship, collective rationalization and shared stereotypes. Montanari and Moorhead (1989) found support for invulnerability, morality, self censorship, the lack of objectivity, and rationality as factors in groupthink. The illusion of invulnerability was supported by Terborg et al. (1976), as well as Thompson and Carsud (1976, in Callaway and Esser, 1984).

Janis (1986) found a strong relationship between the quality of decision making and the occurrence of groupthink symptoms in an analysis of crises since 1945. Esser and Lindoerfer (1989) found a similar result when the number of groupthink statements increased during the twenty four hours immediately preceding the space shuttle Challenger launch. McCauley's (1989) review of Janis's examples concluded that there was at least some support for the theory. Tetlock (1979) also used Janis's examples, and concluded that although groupthink groups were more positive about their 'ingroup' and more simplistic about the issues, they were not more simplistic about 'outgroups' than were non groupthink groups. Courtright (1978) concluded that the theory Janis (1982) developed was both testable within a laboratory, and basically accurate.

In a critique of Janis's theory Longley and Pruitt (1980) concluded that morality and stereotyping should be removed from the theory, but that the other six symptoms formed a usable theory had validity. Smith and White (1983) suggested that the theory had value, but could do with some remodelling. Both Longley and Pruitt (1980) and Moorhead and Montanari (1989) suggested that some of Janis's symptoms converged, and this may be a valid comment. The above critique proved to be the least detrimental of the research against groupthink.

1.2.2.2 Studies That Did Not Support Groupthink

Aldag and Riggs-Fuller (1993) found a lack of support for the groupthink concept. As such, they expanded on the groupthink theory to develop the General Group Problem-Solving model (GGPS). This model is conceptually similar to groupthink, but its characteristics are positive in orientation. Neck and Moorhead (1992) found that despite the presence of all the groupthink

antecedents, groupthink did not occur during their analysis of the jury deliberations for the trial of John De Lorean. They argued that a selective bias has been used to promote particular historical events as examples of groupthink. This type of bias clearly limits the validity of the theory.

1.2.2.3 Support For Cohesion Within Groupthink

As with support for groupthink itself, the element of cohesion within the model has received little support. Those studies which have confirmed Janis's conclusions have had similar methodology to Janis (Huseman & Driver, 1979).

1.2.2.4 Studies That Did Not Support Cohesion In Groupthink

Numerous researchers have found that the effect of cohesion on group decision making has been the opposite to Janis' (1982) proposition. Callaway and Esser (1984) concluded that high cohesion levels and poor quality decision procedures preceded the worst quality decisions, while the best quality decisions were made by groups with moderate levels of cohesion.

Leana (1985) focused on group cohesiveness in her study of college students who had either been in small class groups together for one semester or those who were not from the same class. This study found that the non cohesive groups displayed more self censorship behaviour than did the cohesive groups. This finding also opposes Janis's theory. Furthermore, Moorhead and Montanari (1986) found that in a study of groups with a three month history, highly cohesive groups displayed less self censorship than low

cohesion groups. Flowers (1977) performed one of the classic studies of groupthink, and found that while leadership style had a significant effect on the number of solutions put forward, cohesion did not.

Tetlock, Peterson, McGuire, Chang and Field (1992) found group cohesiveness to have no value as a predictor of groupthink. Further, Longley and Pruitt (1980) concluded that groupthink was more likely in groups lacking high cohesion. They also claimed cohesion was more likely to occur in the first stage of group development rather than later, due to a false cohesion, which occurs early in the life of a group.

In summary the support for groupthink has been varied. The evidence from case study reviews has proved more positive than that from laboratory studies, which frequently contain methodological errors. Although groupthink symptoms found support, Janis's emphasis on the importance of cohesion has generally been unsupported.

1.3 COHESION

Cohesion is one of the two most studied aspects of groupthink (Drescher et al., 1985; Podsakoff & Todor, 1985), second only to leadership. Prior to Janis (1982) cohesion was studied as an independent topic (Cartwright, 1968; Festinger, Schachter & Back, 1950; Gross & Martin, 1952; Hagstrom & Selvin, 1965; Libo, 1953; Lott & Lott ,1961; 1965; Mikalachki, 1969; Pepitone & Kleiner, 1957; Seashore, 1952; Van Bergen & Koekebakker, 1959). Cohesion is possibly the most obvious factor to influence the occurrence of groupthink, and almost without exception it is assumed to have a negative influence on group decision quality. Cohesion does yield some positive effects such as increased group stability, increased member satisfaction, and

increased group influence, which Forsyth (1990) claimed are usually overlooked in studies of groupthink. Arguably this occurs because all the positive factors of cohesion, such as increased group stability and satisfaction (Forsyth, 1990) are detrimental when they occur to excess.

Although cohesion or the effects of cohesion has been studied, it is still a poorly defined concept (Drescher et al., 1985). In fact, there has yet to be a definition which satisfies the general research population. Many authors have pointed out the difficulties in defining the concept (Bernthal & Insko, 1993; Evans & Jarvis, 1989; Hogg & Turner, 1985; Mikalachki, 1969; Mudrack, 1989; Nixon, 1976; Stokes, 1983). The definitions of cohesion have been so varied that it has been suggested that the vast array of studies have not all assessed the same concept (Drescher et al., 1985). The most common forms of definition are those which define the concept of cohesion as either *"attraction to group"* or *"a field of forces"*.

1.3.1 The Problem Of Defining Cohesion

The attraction to group approach reached a pinnacle with the study by Lott and Lott (1965, p. 259), who describe the main component of cohesion as *"interpersonal attraction"* within the group as a whole. While this was not the first citation of attraction to group as a definition of cohesion (Festinger, 1950; Pepitone & Kleiner, 1957; Seashore, 1952) it is frequently cited by other researchers as one of the best (Mudrack, 1989; Summers et al., 1988; Turner et al., 1985). The idea of attraction to the group as a definition of cohesion has been widely accepted and is used by many writers (Barnard et al., 1991; Bednar et al., 1974, in Evans & Jarvis, 1989; Cartwright, 1968; Drescher, Burlingham & Fuhriman, 1985; Festinger, 1950; Hogg, 1987; Hogg

& Turner, 1985; Johnson, 1981; Lott, 1961; Mikalachki, 1969; Peteroy, 1980; Stokes et al., 1983; Wheeless et al., 1982).

The other common approach to the definition of cohesion has been the *"field of forces"* approach (Cartwright 1968, in Cartwright & Zander, 1969; Festinger, Schachter & Back, 1950; Gross & Martin, 1952; Gruber, 1981; Libo, 1953; Piper et al., 1983; Piper et al., 1984; Schachter et al., 1968). This type of definition is an extension of the attraction to group approaches, and some authors have made the move from one form of definition to the other (Festinger, 1950; Festinger, Schachter & Back, 1950). The difference between these two definitions is that one focuses solely on what attracts the members to the group, whereas the other focuses on the reasons for that attraction to the group.

The most frequently quoted definition of cohesion is that of Festinger, Schachter and Back (1950, p. 164), who defined cohesion as *"the total field of forces that act on members to remain in the group"*. In an independent study later that year, Festinger (1950, p.274) altered his definition of cohesion to *"the resultant of all the forces acting on members to remain in the group"*. Even when not used outright, these definitions are mentioned as milestones by most writers in this field (Bakeman & Helmreich, 1975; Cartwright, 1968; Dion et al., 1971; Drescher, Burlingham & Fuhriman, 1985; Evans & Jarvis, 1989; Gruber, 1981; Hogg & Turner, 1985; Lott, 1961; Mudrack, 1989; Sakurai, 1975; Van Bergen & Koekebakker, 1959; Zaccaro & Lowe, 1987).

One definition of cohesion which cannot be overlooked in a study of groupthink, is that by Janis (1982). His definition of cohesion in relation to the groups he studied was *"The high degree to which the members value their membership in the group and want to continue to be affiliated"* (Janis 1982, p. 245). It is important to remember that this was a definition created

with the benefit of hindsight, but at the same time it is the one developed specifically with reference to groupthink.

1.3.1.1 What Constitutes A Cohesive Group?

Cohesion has been related to many factors. It has been shown to be positively related to group morale (Bollen & Hoyle, 1990), similarity among group members (Good & Nelson, 1971; Lott & Lott, 1965; Szilagyi & Wallace, 1983, in Summers et al., 1988; Zander, 1979), public declarations of commitment to a course of action (Zander, 1979), the amount of time group members spend together (Drescher et al., 1985; Pelz & Andrews, 1966, in Dailey, 1977; Seashore, 1952; Szilagyi & Wallace, 1983, in Summers et al., 1988; Zander, 1979), stability of group membership (Forsyth, 1990; Shaw, 1976), the group and individual goal match (Shaw, 1976; Szilagyi & Wallace, 1983 in Summers et al., 1988; Wheeless et al., 1982), the presence of an external threat (Shaw, 1976; Szilagyi & Wallace, 1983 in Summers et al., 1988), the exclusivity of membership (Shaw, 1976; Szilagyi & Wallace, 1983 in Summers et al.,1988), the satisfaction that the group provides for its members (Forsyth, 1990; Pelz & Andrews, 1966 in Dailey, 1977; Wheeless et al., 1982), and role interdependence (Mikalachki, 1969).

Other concepts have also been used to define cohesion. Examples are *"stick-togetherness"* (Bollen & Hoyle, 1990; Carron, 1982; Gross & Martin, 1952; Libo, 1953; Mikalachki, 1969; Mudrack, 1989, in Nixon 1976), *"bonded"* "(Mudrack, 1989; Piper et al., 1984; Piper et al., 1983, in Mudrack, 1989), *"solidarity"* (Durkheim,1897 in Forsyth, 1990; Mudrack, 1989; Wheeless et al., 1982), *"commitment"* (Fisher, 1974; Mudrack, 1989), *"group spirit or identity"* (Fisher, 1974; Owen, 1985; Staw, 1975; Stogdill, 1972), *"belonging"* (Bollen & Hoyle, 1990; Bugen, 1977; Good & Nelson, 1971; Mudrack, 1989), *"desire to remain in the group"* (Cartwright, 1968, in

Cartwright & Zander, 1968; Dailey, 1977; Gross & Martin, 1952; Mudrack, 1989; Seashore, 1952; Summers et al., 1988; Zander, 1979), *"we-ness"* (Forsyth, 1990; Libo, 1953; Mudrack, 1989; Owen, 1985), and *"loyalty"* (Burton, 1990; Fisher, 1974).

The necessity for the existence of an objective or goal for the group (Carron, 1982; Goodman et al., 1987), and mutuality (Barnard et al., 1991; Gruber, 1981; Lott, 1961; Lott & Lott, 1965; Mikalachki, 1969; Stogdill, 1972; Summers et al., 1988; Turner, 1987) in their definitions of cohesion have been further inclusions in the work of authors. Some researchers have defined different types of cohesion, such as social cohesion and task cohesion (Drescher, Burlingham & Fuhriman, 1985; Piper et al., 1984; Schachter et al., 1968; Stokes, 1983). Cohesion has also been seen as a factor which should be measured on a continuum, rather than as an all-or-nothing phenomenon (Carron, 1982; Fisher, 1974).

1.3.1.2 How Has The Problem Of Definition Been Solved?

Researchers have avoided the problem of defining cohesion by quoting the definitions of others (Dailey, 1977; Downing, 1958; Eisman, 1959; George & Bettenhausen, 1990; Libo, 1953; Nixon, 1976; Terborg et al., 1976; Wheeless et al., 1982). However, because many definitions appear incomplete this approach is not adequate. Few researchers develop their own definitions, and frequently the issue is brushed aside while researchers ignore the need to have a definition (Mudrack, 1989).

A major issue of concern in the cohesion literature, is that the term cohesion has often been used, and even measured as a variable, without it being defined. This has been done in two ways. Firstly many authors have

described rather than defined the concept (Bakeman & Helmreich, 1975; Good & Nelson, 1971; Mudrack, 1989; Sakurai, 1975; Terborg et al., 1976; Wolf, 1985). These authors have all given broad and vague descriptions of what cohesion is, but do not settle on a firm working definition, not even that provided by another researcher.

Secondly, there has been the assumption that the reader is already familiar with the definition of the term, and therefore no attempt has been made to further define cohesion (Baird, 1982; Berkowitz, 1954; Cohen et al, 1960; Dion et al., 1971; Evans & Dion, 1991; Greene, 1989; Peteroy, 1983; Rabbie et al., 1974; Shaw & Shaw, 1962; Staw, 1975; Stewart, 1988; Taylor & Tyler, 1986; Tziner & Vardi, 1982; Van Bergen & Koekebakker, 1959; Weinberg et al., 1981). Several of these studies actually use cohesion as an experimental variable, without first defining what it is that you are looking for (Peteroy, 1983; Rabbie et al., 1974; Sakurai, 1975; Shaw & Shaw, 1962; Staw, 1975; Stewart, 1988; Weinberg et al., 1981). Furthermore, studies critiquing other research (Mudrack, 1989; Stodgill, 1972) have shown each study to have a different measurement instrument for cohesion, and resulting in the utilisation of a multitude of measures.

Taking the definitional problem into account, no attempt is made in the present study to create a new definition of cohesion or adopt one belonging to another researcher. Rather than be forced to choose one type of definition over another, this research uses elements of the most commonly accepted definitions and combines them

In summary, the above overview contains a variety of definitions, and it is not intended to add to them further by developing yet another. Simultaneously, there is no one definition that can be considered satisfactory

either. As such no working definition will be used in this study. A reason for this, is that the detailed literature review provides a descriptive account of the concept.

1.3.2 Cohesion In Research

Having covered the vast array of definitions of group cohesion in the literature, it is necessary to ascertain what is presently known about the subject. Cohesion has been studied in relation to several concepts such as productivity (Berkowitz, 1954; Greene, 1989; Mudrack, 1989; Podsakoff & Todor, 1985; Schachter et al., 1951; Schachter et al., 1968; Stogdill, 1972), performance (Bakeman & Helmreich, 1975; Evans & Dion, 1991; Staw, 1975; Terborg et al., 1976; Tziner & Vardi, 1982; Zaccaro & Lowe, 1987), group composition (Forsyth, 1990; Barnard et al., 1991; Marshall & Heslin, 1975; Bugen, 1977; Peteroy, 1980; Worchel et al., 1991), sporting success (Carron, 1982; Gruber, 1981; Nixon, 1976), classroom learning (Shaw & Shaw, 1962), conformity and dissent (Forsyth, 1990; Sakurai, 1975; Worchel et al., 1991), and the work group (Dailey, 1977; George & Bettenhausen, 1990; Libo, 1953; Mikalachki, 1969; O'Reilly & Roberts, 1977; Seashore,1952; Summers et al., 1988). Several of these studies are reviewed in the following paragraphs.

1.3.3 Cohesion And Work

The major application for the concept of cohesion within industrial psychology, is the effect it may have on the work group. Several different approaches have been used when studying cohesion within this setting, including the measurement of performance, productivity and outcome, as affected by group cohesion. The studies discussed below are a sample of the main research done in this field. Cohesion appears to have a positive effect

within the work place, as can be seen when its relationship to production and performance are discussed.

1.3.3.1 Cohesion And Productivity

Cohesion has been linked to the levels of production or performance of groups. The common theme in this type of research seems to be that cohesion will have an effect on the output of a group, but whether that will be a positive or negative effect is still undecided. In fact the results of these studies have been conflicting (Lott & Lott, 1965) and inconclusive (Greene, 1989; Stodgill, 1972). The main swing seems to be toward a positive effect (Evans & Dion, 1991; Greene, 1989; Seashore, 1952; Wheeless et al., 1982).

The majority of studies have found a positive relationship between cohesion and productivity (Dailey, 1977; Evans & Dion, 1991; George & Bettenhausen, 1990; Greene, 1989; Mikalachki, 1969; Seashore, 1952; Summers et al., 1988). These researchers have found cohesion to have a positive effect on productivity, and productivity related work habits such as decreased absenteeism (Mikalachki, 1969), increased turnover (George & Bettenhausen, 1990), reduced anxiety, and increased uniformity of production (Seashore, 1952). Cohen et al. (1960) also found that trained cohesive groups were able to produce significantly more ideas than any other group.

Several studies have contradicted this research. Stodgill (1972) reviewed previous studies and found that cohesion adversely affected productivity, which he claimed was due to the conflict the two created for the groups' time. Research by Schachter et al. (1968) produced similar results.

There has been a lack of consensus amongst researchers on the relationship between cohesion and productivity. However some research has united these contradictions. (Fisher, 1974; Forsyth, 1990). For example, Fisher (1974) developed a curvilinear model which explained how both findings have found support. Within this model cohesion and productivity increased in unison to an optimal point. At this point the increase stabilised and remained constant. Any further increase in one factor resulted in a decline in the other.

Another indicator of a High Cohesion Group, is the verbal expression of intimate information was perceived as an indicator of a high cohesion group (Stokes et al., 1983). However, this held only if the information was not disclosed too early in the life of the group. Early disclosures appeared to make the group members uncomfortable (Stokes et al., 1983). Peteroy (1980) suggested that members of cohesive groups might feel more comfortable than members of non cohesive groups about giving fellow participants feedback and partaking in self disclosure.

1.3.3.2 Cohesion And Performance

Unlike productivity, there has been plenty of support for a positive relationship between cohesion and performance. Staw (1975), Bakeman and Helmreich (1975), Wheeless et al. (1982), and Miesing and Prebble (1985) all gained results which indicated a positive relationship between the two variables.

Staw (1975) found that subjects who were told that their group had performed well, developed higher levels of cohesion than did subjects who were told their group had performed poorly. Equally, Hoogstraten and Vorst

(1978) found that the performance of a group task increased cohesion, but the performance of an individual task did not. Bakeman and Helmreich (1975) obtained a similar result in a field study where a groups' cohesion in their leisure time was highly correlated with their work group performance. A positive correlation between satisfaction, cohesion, performance and interaction was also found by Wheeless et al. (1982). Miesing and Prebble (1985) found cohesion to be significant in explaining high performance in laboratory simulations, where highly cohesive groups with high performance norms performed at the highest level.

Alternatively Tziner and Vardi (1982) found the performance of self selected Israeli tank crews was not significantly affected by cohesion. When combined with command style, cohesion did however reach a level of significance.

1.3.4 Types Of Cohesion

Cohesion has frequently come under fire as an undefined concept, and therefore unmeasurable. One response to this criticism has been to use a multidimensional approach to the definition of cohesion. This has been fairly popular, and taken many forms.

Several authors (Bernthal & Insko, 1993; Grubb, 1987; Hagstrom & Selvin, 1965; Mikalachki, 1969; Wheeless et al., 1982; Zaccaro & Lowe, 1987) have measured cohesion in a multidimensional manner. These researchers have acknowledged the need to re-define cohesion, in accordance with the variety of concepts it includes. Bernthal and Insko (1993) concluded that one reason cohesion does not always lead to groupthink is because there is more than one type of cohesion. Most approaches differentiate between socially

orientated cohesion and task orientated cohesion. Socially orientated cohesion focuses on the role of the group as a provider of social satisfaction, while task orientated cohesion focuses on the task the group is aiming to achieve. Task orientated cohesion was shown to prevent groupthink (Bernthal & Insko, 1993), and therefore should be promoted within decision making groups, although social emotional cohesion does not necessarily have to be completely rejected. In highly task orientated groups, group effectiveness may determine attraction, and that effectiveness will be hindered by high levels of friendship (Hagstrom & Selvin, 1965).

Zaccaro and Lowe (1987) divided cohesion into task-based (personal attainment of goals) and interpersonal (interpersonal relationships within a group) types. The results of their study showed that high task-based cohesion improved group performance, but interpersonal cohesion did not. Mikalachki (1969) developed the concept of social control as an element of cohesion. This included group members either internalising the rights of the group, or the use of threats and punishment to maintain the group norm. Drescher et al. (1985), also advocated a moult dimensional approach to cohesion assessment, and identified a person dimension and a time dimension within the concept.

1.4 ISSUE IMPORTANCE AND THE CONTROVERSIALITY OF THE TOPIC

This is an area of research which has largely been untouched. Very few studies have addressed the topic of group discussion within the groupthink framework. The following is an overview of those studies which have assessed the impact of topic.

1.4.1 Issue Importance

Logically one would assume that the significance of the issue under discussion would influence the likelihood of groupthink. Surprisingly, there has been a paucity of research in this area. For example McGraw, Lodge and Stroh (1990) found that potential voters gave more consideration to issues of personal importance than to issues which were not of personal importance in their voting behaviour. Kerr (1991) claimed that individuals showed no significant concern or interest in personally unimportant issues, which lead to a lack of commitment to a course of action. In addition, Kerr (1992) found that groups came to an unanimous agreement more easily for unimportant issues than for important issues.

Studies by Kerr (1991; 1992) have shown that as the importance of the issue to the group members decreased, so did the power of the majority to influence the individual. Kerr (1991) suggested that groups became more group orientated rather than task orientated as the issue importance declined. This would explain the conclusion common to the above studies, that as the group members' personal interest in an issue decreased, the same group members came to an agreement more easily and were less interested in following the outcome.

Issue importance has also been related to the personal interactions that occur within the group. Shure et al. (1962) concluded that when planning and task activity were required to take place simultaneously, planning gave way to task activities. An example of this effect would be when a group of strangers were required to immediately solve a problem, before becoming acquainted with each other. Shure et al. (1962) assumed that attention could only be given to one activity at a time, and the most pressing activity

won out. Further, when the group members believed that a task was important, they showed more systematic processing than when they considered their task to be of low importance (Maheswaran & Chaiken, 1991).

1.4.2 Cohesion And Issue Importance

Studies that address both cohesion and issue importance are fewer than those which address issue alone. Barnard et al. (1991) assessed the effects of cohesion versus conflict in groups where members were either unanimous in their decisions about four controversial topics, or where the groups contained one deviate. The aim was to achieve an unanimous agreement. The results indicated that the opinion change of a deviate was higher when the group was cohesive than when it was not cohesive.

Research has found that there is a tendency for groups to favour the proposal which is most in support of their self interest. In Hagen and Burch (1985) the group members chose their own subject for discussion, and the experimenters, then measured the amount of off topic discussion amongst the group. They found a positive relationship between task accomplishment and group satisfaction. Young et al. (1991) assessed self interest and level of experience of two topics.

There has been a lack of research that examines issue importance and discussion topic in the context of groupthink. When this deficit is looked at alongside the multitude of problems within the research on cohesion, it becomes obvious that there is a real need for more research in this field.

1.5 PROBLEMS FOUND IN THE REVIEW OF PAST RESEARCH

The ambiguity of previous research has led to uncertainty regarding its validity. This is evident when one examines how research has focused on only a few aspects of a very complex concept by seldom moving past studies of cohesion and leadership. Within the cohesion research, the methodology has often been criticised. Researchers have attempted to "create" cohesive groups in several unsatisfactory ways, and then tried to generalise from the results obtained in such studies.

1.5.1 The Limitations Of Previous Groupthink Research

Previous research, while extensively addressing some aspects of Janis' (1982) groupthink model, has left antecedents other than cohesion and leadership largely untouched. The theory has rarely been studied in its entirety, with researchers frequently addressing only one or two antecedents or symptoms at a time (Longley & Pruitt, 1980; Park, 1990). Many associated variables, such as the importance of the topic under discussion have been almost completely unstudied. Complete acceptance of the groupthink model is not possible without further studies of the entire theory (Posner-Weber, 1987; Park, 1990; Aldag & Riggs-Fuller, (1993).

Many of the errors in groupthink research are also true of the research done on cohesion. These tend to revolve around the two issues of definition and experimental methodology. The definitional problem has already been discussed at length, and the methodology problems now need to be addressed.

1.5.2 The Limitations Of Previous Research On Cohesion

The main type of methodological error made in previous groupthink research is in the manipulation of the cohesion measure. Researchers have frequently attempted to create cohesion where none exists. Whereas Janis (1982) considered cohesion to be something that develops over time rather than something able to be created at will, many researchers are guilty of attempting to enforce it on their subjects. Numerous studies have attempted to manipulate the cohesion of two groups, usually by telling the members of one they will like each other, and telling the members of the other that they could not be placed in a group that they would like (Baird, 1982; Berkowitz, 1954; Cohen et al, 1960; Dion, 1971; Downing, 1958; Evans & Dion, 1991; Good & Nelson, 1971; Schachter et al., 1951) and so had to be placed in this group.

This kind of methodology relies very heavily on a series of assumptions which may or may not be true, and are certainly simplifications of a complex social situation. It is assumed that by informing a group member that the other members of their group are similar to themselves, that person will feel positively toward those other group members (Gross & Martin, 1952). This assumes that a positive relationship within the group can be created at will to resemble the cohesion of Janis' (1982) groups, and that this effect will last even if when the group comes together, they obviously will not get on well. This type of procedure assumes that the experimental instructions will automatically be accepted at face value, and will not be affected by experience (Gross & Martin, 1952).

The other type of manipulation that has been used, has been the altering of individuals' or groups' feedback in an attempt to make a group appear

either *"cohesive"* or *"non cohesive"* (Baird, 1982; Berkowitz, 1954; Carron, 1982; Dion et al., 1971; Downing, 1958; Schachter et al., 1951; Zaccaro & Lowe, 1987). These methods have often been used in tests of Janis (1982) theory. This has created a glaring and unacceptable fault in the research to date and it is unacceptable that this research should be given any credence at all. An example is Flowers (1977) who tried to create cohesive groups by forming groups where each member of the group knew the group leader, but where there was not necessarily a group history as such.

Most studies of cohesion have produced *"cohesive"* and *"non cohesive"* groups, which do not match Janis' (1982;) definition of cohesion (Janis & Mann, 1977). He considered that a cohesive group was characterised by having a past, a present and a future. Janis (1982) believed that cohesive groups were not experimentally created, but carefully formed and frequently self-selected groups of people with a common cause. The group members had frequently known each other for years, and existed within the same social circle. They worked and socialised together as much through choice as through necessity. In addition, the group members and often their families actually liked each other. These people formed homogeneous groups, which Janis (1982) considered cohesive.

Other limitations in previous studies of cohesion include the way cohesion has been measured. Piper, Marrache, Lacriox, Richardson, and Jones (1983) considered that some researchers had measured the antecedents of cohesion rather than the concept itself. While the relationship between cohesion and productivity has frequently been studied over the years few, if any, studies use the same measures as each other (Mudrack, 1989). Each different measure cannot necessarily be compared to any other and the result has been few research advances in the field. Mudrack (1989) considers

these approaches to the measurement of cohesion to be so different from each other, as to make it questionable whether they even measure the same concept.

Further, on the associated point of the output by cohesive and non-cohesive groups, many researchers still assume that by combining the results of individual group members they have obtained a measure of group output (Fisher, 1974). This is not an acceptable assumption, because it does not account for the processes that occur inside the group which act to increase or decrease this rate of production.

1.6 RATIONALE FOR THE PRESENT RESEARCH

Resent research has shown little support for Janis' theory in its entirety. This is not surprising as the theory has a large number of components. It has however left a number of questions unanswered.

The present study derives from inconsistencies regarding the effect of cohesion in groupthink. As already mentioned, most of the research undertaken on groupthink has addressed the concepts of leadership and cohesion. Whether this is because they are easier to study, or whether they are considered more influential in the development of groupthink is uncertain. The leadership issue has been given more attention than has cohesion, and certain leadership styles have been found to be important in groupthink research. The overwhelming finding has pointed to the benefit of an open and casual leadership.

Why have researchers not used existing groups to establish solid findings? The answer would appear to lie in the difficulty in obtaining these

groups for research. Existing groups, which are willing to co-operate in research of this type are not easy to find. Even then, to study them while they work on real problems can be even harder. The biggest error in the current research is a lack of work on the kind of group Janis considered to be cohesive.

1.7 THE PRESENT STUDY

The present study sought to correct some of the errors in past research. The primary goal in undertaking the present research was to use a group with a past, present and future. That is, a group which spent a significant amount of time together in the work place or classroom as well as socially, and who fitted the description of a cohesive group as defined by Janis (1982).

Finding such a group was no easy task, and a group of Christchurch College of Education students were paid for their involvement. These subjects fitted the requirements of the study and were willing to participate. Further subjects were obtained for comparative purposes.

It was deemed very important to use discussion topics which were relevant to the subjects, and so they selected them themselves. This process involved creating a group list of potential discussion topics which they were told had to be both controversial and relevant to their group. The experimenter then used these to select the final topics. Although this method did not create topics of the same nature as those cited in Janis (1982), it was decided that this method would uncover issues that were relevant to the group under study. This naturally led to topics which were not business orientated, and which required a recommendation rather than a firm policy or plan of action.

This drawback was weighed against the importance of using a real world issue, with which the subjects could identify and of which they had prior knowledge and experience. It was decided that realism was the most important factor in the study. The use of irrelevant problem-solving games, which are probably meaningless to the participant, could not be fully justified in the present study, as the emphasis was on real groups and real issues.

Having established a deficit in the area of groupthink research, this deficiency was translated into two hypotheses in need of testing.

1.8 HYPOTHESES

The Hypotheses to be tested were:

Hypothesis One : That the level of group cohesion will have a significant effect on the occurrence of groupthink symptoms.

Hypothesis Two : That the topic under discussion will have a significant effect on the occurrence of groupthink symptoms.

CHAPTER 2
Method

Fifteen subjects participated in the present study. These subjects were divided into three groups, each of five people. One group was an existing group of five members which comprised both males and females. These subjects were Christchurch College of Education students, while the other two groups were made up of volunteer subjects from the Christchurch College of Education and University of Canterbury. The only control undertaken in the selection procedures for these two groups was to ensure that the groups contained both male and female members.

The existing group and one of the other two groups completed five discussion sessions. The first session was used to determine the topics of discussion for the latter sessions. The remaining four sessions each addressed a different topic which the group had previously chosen. The topics for discussion were placed in an order relating to how potentially controversial they would be for the group members, with the final session addressing an extremely divisive topic. The third group had only one group discussion, during which they addressed the same highly controversial issue that the other two groups discussed in their fifth and final session.

2.1 SUBJECTS

The subjects for this study were recruited through advertisements placed in "De Press", the student publication at the Christchurch College of Education, and through advertising at the Student Job Search at the University of Canterbury. From this advertising, five third year Christchurch College of Education students came forward as a group. This was labelled

the High Cohesion Group (refer 2.1.1) and contained three male and two female members.

In order to create two more groups of equal size to the first, it was necessary to obtain another ten subjects. These subjects were obtained in the same manner as the first group. They comprised of both Christchurch College of Education, and University of Canterbury students. None of these volunteers had ever met each other before. The distribution between these groups was on a random basis. One group of two male and three female subjects, was labelled the Low Cohesion Group and had five experimental sessions. The other group contained three male and two female subjects. This group was labelled the Non Cohesion Group and met for only one experimental session.

All three groups used in the study contained both males and females. The age range was from 18 to 45, although most subjects were between 22 and 25. The subjects used were all paid volunteers, employed to participate in this study. They were informed that they were participating in a study on group decision making. Because subjects would be required to participate in up to five group discussions, each of approximately half an hour, subjects were not paid until the completion of the debriefing, twenty-four hours after the last session.

2.1.1 High Cohesion Group (Group One)

This group met the criteria of a cohesive group, as assessed by their answers to the Group Questionnaire discussed in section 2.2.1. This group satisfied Janis's (1982) theoretical requirement that cohesiveness was dependant on members having a past history, a present and future of

interactions. At the commencement of the first session, subjects in this group averaged 6.4 on a seven point Likert scale to the statement "I have known the other members of this group previous to this meeting". The range of the scale was; one was "no", two was "seen before", four was "slightly", and seven was labelled "very well". In comparison, responses from members of the other groups when asked this same question, showed an average score of 1.0 for the Low Cohesion Group, and 1.4 for the Non Cohesion Group.

The High Cohesion Group consisted of five Christchurch College of Education students. It consisted of three males and two females, who were all in their early twenties. They were all European, unmarried and one had a child. They were all in their third year of study as Secondary School trainees, and therefore they attended many classes together. These subjects had known each other as a group for at least eight months. However, the group members were not constantly together either in class or socially. They all took different subjects within their course at the Christchurch College of Education, but these classes usually included other members of the group.

The subjects were individually asked how much time they spent with the other members of the group, and they reported that they spent a minimum of ten hours a week in class or study time together. Mostly this was time they spent with one or two members of the group, rather than with the group as a whole. Some of them spent up to sixteen hours a week in class or study time with another group member. In addition, subjects reported that they tended to choose each other as work mates whenever they were requested to form small study, work or role playing groups in class.

The average time each group members reported spending socially with other group members was 14.4 hours per week. Some members of the group

reported spending up to twenty hours per week with other group members, while others spent only between one and five hours per week socially with other group members. Furthermore, three members of this group also reported that they considered two other group members to be close friends. Only one group member reported no close friends within the group. In contrast, of the two groups studied, there were no reports of group members considering each other as close friends, and no reports of spending time together either socially or in class.

2.1.2 Low Cohesion Group (Group Two)

The five participants in the Low Cohesion Group had never met before. Four were Christchurch College of Education students and the fifth was a University of Canterbury student. Of these subjects, three were Primary School trainees, each at a different stage of their course. One subject was a Secondary School trainee in his final year and the other subject was a first year university student.. There were three females and two males and they were all in their late teens or early twenties. They were all European, unmarried and childless.

None of these subjects had ever met before the first experimental session. They had no past, present, or future interaction, with the exception of the experimental sessions. They were therefore, a group with no cohesion at the beginning of the first session. By the final session however, this group may have developed some level of cohesion, and this could have affected the outcome of that session. It was at this point that due to the experimental procedures to be used, it was considered that it would be beneficial to add a third group to the study.

2.1.3 Non Cohesion Group (Group Three)

Like the Low Cohesion Group, the final group consisted of five people who had never met before. Only one subject was a Christchurch College of Education student and the remaining four were University of Canterbury students. Three of the subjects were males and two female. They ranged in age from their late teens through early twenties, with two subjects in this group being over 35 years. Four of the subjects were European, with one subject being Maori. Three were unmarried, with the other two either married or living with a partner. One subject had children.

Although Group Three was similar to Group Two in members' initial cohesiveness, this group differed in that they met only once during the course of the study. Because they were not to be studied after their single experimental session, they were labelled the Non Cohesion Group.

2.2 MATERIALS

2.2.1 Group Questionnaire

The Group Questionnaire (Appendix 1) was designed with the intention of testing the cohesion of the group, both at the beginning of the study, and to see if there was any change in levels of cohesion over the course of the study. The questionnaire contained items about each member's attraction to the group, confidence about the group, liking of the group, perception of group success, group spirit, individual contribution to the group, and desire to continue with the group. It comprised a list of fourteen statements each scored on a seven point Likert scale, and a further three questions which involved short answer responses. These short answer questions were used to obtain

information on the exact length of time the group had existed, and the amount of time the members of group one spent together.

Given the problems of finding a clear and generally accepted definition of cohesion, the questionnaire was designed using questions based on several different definitions of cohesion. Questions one to four were taken directly from Leana (1985), whose work focused on the relationship of attraction to group as group cohesion. The design of questions nine to twelve, fourteen and fifteen, used Mudrack's (1989) analyses of cohesiveness definitions. The remaining questions five to eight, thirteen, and seventeen were designed to obtain further biographical information on the history of the groups, and to discover the level of friendship or closeness among group members.

This questionnaire was administered three times to the High Cohesion Group and three times to the Low Cohesion Group. Both of these groups received the questionnaire at the beginning of the first, third and fifth sessions. This was done to test for changes in group cohesion over the course of the study. The Non Cohesion Group completed the questionnaire only once, as the group was not to meet again, and a test of change in cohesion was not required for this group.

2.2.2 Issue Questionnaire

The Issue Questionnaire (Appendix 2) was designed for the present study to determine whether the topics of the study were important to the subjects and to assess their level of experience with these topics. It was also designed to discover if the subjects had withheld any information from the

group sessions. It was administered upon the completion of the debriefing session.

This questionnaire comprised two yes/no questions, and eleven short answer questions. This was a test of the subjects' openness in the group discussion sessions. It was administered once to each of the three groups at the completion of the post-study debriefing, which was held twenty four hours after the last session of each group. The questions asked whether the subjects had discussed the topics before and/or after the sessions, with whom they had discussed the topics, if their opinions had changed at any time, if they had not mentioned something that they knew was relevant, and if they had thought after the session that the group decision was wrong. Because of the sample size of each group, statistical validity was unobtainable. As such, the results were maintained in their qualitative format.

2.3 PROCEDURES

Group sessions were held in various rooms on the Christchurch College of Education campus. The High Cohesion Group met in their lecture room after their classes, while the other two groups met in either of two other rooms made available by the Christchurch College of Education staff. All sessions were video recorded, with the subjects seated causally in a semi-circle where they were all clearly visible to the video camera. There were no time constraints placed on the duration of the sessions, although the subjects were advised that the sessions would take ten to fifteen minutes. In fact the average time taken per session was twenty two minutes. However two sessions were only thirteen minutes long while another session took forty minutes.

2.3.1 High Cohesion Group

The High Cohesion Group met for five experimental sessions and one debriefing session. They began their first session with the first application of the Group Questionnaire, followed by these instructions, both in a written and verbal format:

> *The research being undertaken concerns group decision making. Over the following meetings you will be presented with one new topic to discuss at a time, and for each, you are asked to compile a written group statement or recommendation which could be given to the appropriate person, be it fellow student, college authority or political group. This should be done in an effort to firmly express group opinion on this topic, whether this agrees with the opinion of the recipient or not.*
>
> *The purpose of this session is to develop a list of approximately 10-15 (or as many as possible) suitable discussion topics. Each of the following four meetings will address a different topic, selected from this list. Each topic should be something which applies not only to the members of the group, but to at least the general Christchurch College of Education population, or better still, the general population of New Zealand.*

The group was given the chance to ask the experimenter any questions they had and then handed a piece of paper, blank except for the heading "Discussion Topics". A group discussion proceeded, during which they created a list of suitable group discussion topics.

Before the second session, this list was compared to a similar list compiled by the Low Cohesion Group. Topics which appeared in both lists were selected to use as discussion topics for future sessions. This selection process ensured the topics used for the experimental sessions were in fact considered important and valid by the subjects discussing them. The subjects themselves chose the topics that were important to them, thereby ensuring there was no reason to debate the choice of topics, and why they were labelled as "important".

Both the High Cohesion Group and the Low Cohesion Group listed as discussion topics bulk funding and the presence of a new Japanese business school and its students on the Christchurch College of Education campus. As these were the only two topics which were mentioned by both groups, it was necessary to choose two more topics, each of which appeared on one group's list, but not on both. This was done by selecting two issues which it was thought would create some difference of opinion within each of the two groups. Abortion was listed only by the High Cohesion Group, but was a topic which was considered to be likely to create a difference of opinion. Maori ownership claims under the Treaty of Waitangi was listed by the Low Cohesion Group, and this was a current and controversial issue at the time of the study.

The four topics were then placed in an order the experimenter considered most likely to reflect both their abilities to create controversy and a difference of opinion within each of the two groups. This was done to give the Low Cohesion group the opportunity to increase their level of cohesion as the study progressed, and before they discussed a sensitive issue such as abortion. The first topic was one on which it was likely that the subjects would agree, while the final topic was one on which subjects were likely to hold a

range of opinions. The topic presentation order was bulk funding, Japanese students on campus, Maori claims under the Treaty of Waitangi, and abortion. Although bulk funding could arguably have been more important than some of the other topics to these subjects, it was considered that as they were all students they would tend to have similar opinions, and there would be little conflict within the group on this issue.

At the start of the second, third, fourth and fifth sessions, the following instructions were given to the group, both in a written and verbal form. The asterisks were replaced with the issue selected for discussion in that particular session.

> *The purpose of this session is to discuss *******. The group is required to discuss the issue put before them, and on completion of the discussion, to compile a written statement with which all group members agree. If no agreement is possible, then simply outline the arguments within the group, but do aim for agreement. All group members are required to initial this statement, as evidence that they agree with it.*

Again, the group was given the opportunity to ask the experimenter any questions, and was then handed a piece of paper, blank except for a heading of the issue to be discussed. For example, "bulk funding" or "Japanese students on campus". At the beginning of the third and fifth sessions, before the instructions were given, the group members were again asked to complete the Group Questionnaire, to test for any change in group cohesion over the course of the study.

At the end of the fifth experimental session, it was arranged for the High Cohesion Group to meet twenty-four hours later. This session was used to administer the Issue Questionnaire, to debrief the subjects about what the experimenter had been testing for, and to pay the subjects. All subjects were given the opportunity to contact the experimenter if they had any further questions, as well as to receive information on the results of the study. The Issue Questionnaire was not completed until a day after the final session in order to give the subjects time to think over that session.

2.3.2 Low Cohesion Group

The Low Cohesion Group experienced exactly the same procedure as the High Cohesion Group. These two groups were studied concurrently to enable a comparison of their topic lists. There were no differences in the experimental procedures of the High Cohesion Group and the Low Cohesion Group, and the only difference between the groups was that the subjects in the Low Cohesion Group had never met each other previous to the first session.

2.3.3 Non Cohesion Group

The Non Cohesion Group was formed because of the possibility that the Low Cohesion Group would have developed some level of cohesion by the fifth session. The discussion of abortion, the final and possibly the most controversial topic, could be affected by this potential increase in cohesion.

The Non Cohesion Group met only once, and their experimental environment was the same as for the other two groups. The same Group Questionnaire and instructions were given and read to this group as to the

other two groups at the beginning of their fifth session. This group also completed an Issue Questionnaire and was debriefed the same as the two other groups.

2.4 CODING OF RAW DATA

All of the group discussion sessions were video recorded, and these recordings were then transcribed into a written format. The occurrence of groupthink symptoms was measured by comparing each statement made during each discussion session to the descriptions of the eight groupthink symptoms (Janis & Mann, 1977; Janis, 1982). These were illusions of invulnerability, rationalisations of negative information, stereotyping of outgroups, assumptions of morality, self censorship, illusions of unanimity, mindguarding and direct pressure (Janis, 1982; Janis & Mann, 1977). For each session a scoring sheet (Appendix 3) was drawn up to score the number of statements made by each group member which fitted the operational definition of the symptoms of groupthink (Janis, 1982), as discussed in the literature review (Section 1.2.1.2.1).

In order to ascertain whether or not there was an intergroup difference in terms of attention and time spent on task, as opposed to time spent in discussing irrelevant material, the number of on task and off task statements were recorded for each group. To determine the number of on task and off task statements made during each discussion, each statement made in all sessions, was given a score of between one and five. A score of one required the subject to mention either the words in the title of the topic for discussion, or to be obviously discussing the topic, for example, to say the words "bulk funding" during a statement. A two was scored if the statement was about a topic very closely related to the topic under discussion, for example, to

discuss individual contracts during the bulk funding session, or to mention the name Lockwood Smith (the Minister of Education). A three was for any topic getting further away from the task, such as other general educational issues in the bulk funding session. A four meant that the group was following a line of conversation that was understandable to the bystander, but was in no way related to the discussion topic, for example, talking about mutual experiences or friendships. A five was given when the statement was a joke, or had no relevance to the discussion topic. For example, reference to another group members' jewellery. This data was then coded into a scoring sheet similar to that used for the groupthink symptoms.

For each of these coding systems, an inter-rater reliability test was done on all the data. This was performed by the researcher and one other masters thesis student, who each individually encoded all the data and then compared the results. The average reliability was 84.25%, and varied from symptom to symptom. Stereotyping and direct pressure each scored 91% reliability, while self censorship scored 89%. Collective rationalisation was scored to 86% reliability between raters, while inherit morality was scored to 84% and mindguarding to 81%. The illusion of invulnerability was only scored to 77% accuracy and the illusion of unanimity to 75%. For the on and off task data, the average inter rater reliability was 87%, and ranged from 82% for group two (session four) to 91% in group three (session five).

2.5 ANALYSIS OF DATA

The aim of the study was to determine if significant differences would occur between the various groups which had various levels of cohesiveness. The methodological approach adopted initially was qualitative. However, due

to sample size, it became necessary to adopt a qualitative statistical approach in analysing the data. Anova's and t-tests as well as Tukey HSD were used.

CHAPTER 3
Results

3.1 GROUP QUESTIONNAIRE

The results for this section are summarised in Figure. 2. Group one had a mean questionnaire score for the first session of 6.02 (where 7.0 is the best possible score). This increased to 6.11 by the third application of the questionnaire. Although there was a higher score for the fifth session than for the first, this was not to a level of statistical significance when analysed using an ANOVA (1, F= 0.25, p< .62).

Group two had a mean score of 4.06 for the first application of the group questionnaire which rose significantly to a mean of 5.28 by the fifth session (2, F=20.42, p< .001). For the first session group one's score was significantly higher than group two's, when measured by an unpaired t-test (t=8.17, p< .001).

The use of a repeated measures ANOVA for all the questionnaire data for groups one and two, highlighted a significant difference in answers to the group questionnaire (1, F=75.86, p< .001). These results are from all sessions combined, and show that on average, group one displayed higher group questionnaire scores than did group two.

In each of their first sessions, group one (session one) and group three (session five) were significantly different from each other (1, F=140.33, p< .0001). Group two session two and group three session five (mean score 3.78) were not significantly different (t=1.09, p<.28).

In the fifth and final session, the means of 6.11 for group one, 5.28 for group two and 3.78 for group three showed a significant difference (2, F=59.27, p< .001). Group one had a significantly higher questionnaire score than group two (1, F=17.31, p< .0001). Group one was also significantly higher scoring than group three (1, F=143.98, p< .0001). Group two in turn scored significantly higher than group three (1, F=40.16, p< .0001).

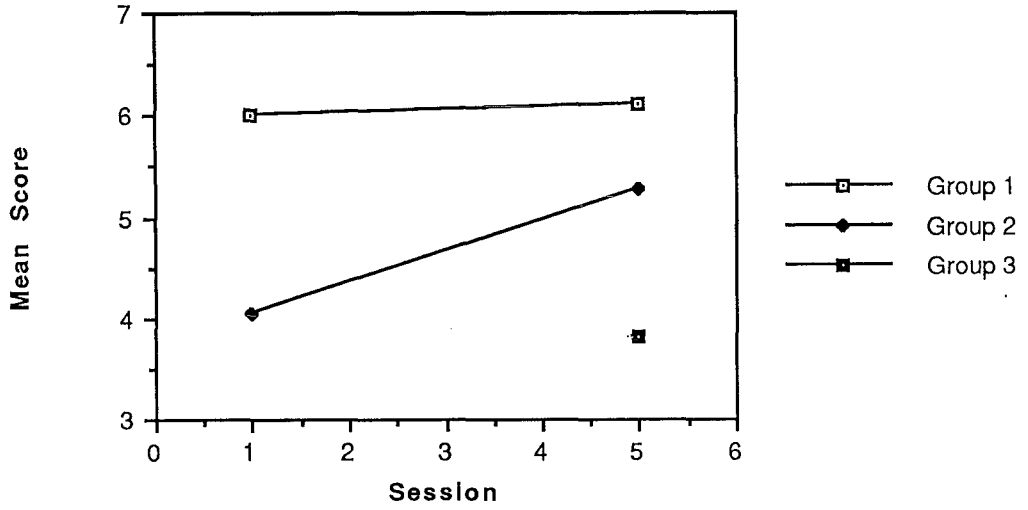

Figure 2. Mean scores for group questionnaire.

3.1.1 Results By Question

An assessment of the questions highlighted the differences between group one and group two (Appendix 1). The questions 7 (t=3.81, p< .006), 8 (t=3.31, p< .01), 11 (t=10.61, p< .001), 12 (t=4.28, p< .003), and 13 (t=22.04, p< .001) were scored significantly differently between groups one and two at the first application of the questionnaire.

The mean score for group one in question seven ("I would tell members of this group some personal information about myself") was 6.2, a value that is significantly higher that the score of 3.5 for group two (t=3.81, p< .006). For question eight ("I would tell members of this group private, confidential

information about myself") group one again scored higher than group two, with a mean score of 5.4 compared to 2.75 respectively ($t=3.31$, $p< .01$). Group one's mean score of 6.6 for question 11 ("I have enjoyed my previous contact with this group"), was significantly higher than group two's mean score of 4.0 ($t=10.61$, $p< .001$). For question 12 ("I would wish to see the other group members outside this group") group one's score of 6.4 was significantly higher than the score of 3.75 gained by group two ($t=4.28$, $p< .003$). Finally, question 13 ("I have known the other group members previous to this meeting") was also scored higher by group one with a mean score of 6.4, a significant increase on the score of 1.0 for group two ($t=22.04$, $p< .001$).

Only question 13 was significantly different at the second completion of the questionnaire, when group one scored 6.2 compared to 2.8 scored by group two ($t=6.43$, $p< .002$). In the third application of the questionnaire, there were no significant differences based on individual questions. No questions other than those described here displayed any significant difference between any of the groups.

3.2 ISSUE QUESTIONNAIRE

There was a general trend within group two of higher rates of self-disclosure than group one. In group one, two of the group members reported withholding information from the group discussion, while no members of group two withheld information. Simultaneously, all members of group one specified any disagreement they had with the group position. In group three only three of the group members raised their disagreements.

In all groups, the majority of group members had previously discussed the four topics, usually with their friends. In group two, two members had

discussed the topics after the sessions again with their friends. Group two however did not admit to uncovering any new information.

Members of group one had previously discussed only the issues about Japanese students (one subject) and abortion (three subjects). However, by the completion of the study they had discussed the other issues with other members of the group (Table 1.a.). They commented that such discussions had revealed the other group members' opinions, some of which had surprised individuals. One group member reported that the discussion had made him think more about abortion. Three group members had found out information they had not previously known.

Although members of group two claimed not to have withheld any information, one group member did admit to disagreeing with a position the group took and not saying so. Likewise the members of group one claimed to have not disagreed and kept quiet, but then one admitted to not completely agreeing with one decision.

Group three was apparently even more open than group two. All five group members claimed to have always agreed with the group outcome, but two admitted to withholding information, and also disagreeing with a group opinion and not saying so. In addition, only three claimed to have verbally stated their disagreement, compared to all five of group one, and four of group two (Table 1. b.).

Table 1. a. Issue questionnaire summary of numbers of responses to items.

	Group one	Group two	Group three
Question 1. A). Previous to these meetings, have you discussed any of the following issues?			
Bulk Funding	5 Yes	4 Yes	N/A
Japanese Students	3 Yes	4 Yes	N/A
Maori Claims	4 Yes	5 Yes	N/A
Abortion	5 Yes	4 Yes	4 Yes
B). If yes, with whom?			
Friends	3 subjects	5 subjects	5 subjects
Group member	3 subjects	0	0
Person affected	4 subjects	2 subjects	0
Question 2. A). Have you discussed any of the following issues since the group meetings?			
Bulk Funding	0 Yes	2 Yes	N/A
Japanese Students	1 Yes	2 Yes	N/A
Maori Claims	0 Yes	2 Yes	N/A
Abortion	3 Yes	2 Yes	1 Yes
B). If yes, with whom?			
Friends	0	3 subjects	1 subjects
Group member	2 subjects	1 subjects	0
Person affected	1 subjects	1 subjects	0

Table 1. b. Issue questionnaire summary of numbers for responses for all three groups.

	Group one	Group two	Group three
Question 2. c. If you discussed any of the issues following the group meetings, did you discover anything you did not know?	3 Yes	0 Yes	0 Yes
Question 3. During any session, did you know any information you withheld?	2 Yes	0 Yes	2 Yes
Question 4. Did you disagree with the group at any time, but not say so?	0 Yes	1 Yes	2 Yes
Question 5. Did you agree with all the group's positions?	4 Yes	5 Yes	5 Yes
Question 6. Did you disagree with the group at any time, and say so?	5 Yes	2 Yes	3 Yes

3.3 GROUPTHINK SYMPTOMS

To enable an ease of reading in the following figures, the groupthink symptoms are frequently referenced by number. In all cases, they are the illusion of invulnerability (symptom one); the rationalisation of negative information (two); the stereotyping of outgroups (three); inherent morality (four); self censorship (five); the illusion of unanimity (six); mindguarding (seven); and direct pressure (eight).

There was a significant difference in the occurrence of groupthink symptoms between groups one and two. For example, group two consistently exhibited more groupthink symptoms than group one. The mean number of groupthink symptoms displayed in group two, per session was 3.45 instances of each symptom per group member per session, whereas the mean for group one was 1.24. The results were in the opposite direction of those expected, and were significantly different between the two groups (1, $F=29.80$, $p<.0001$).

In session two the members of group one displayed a mean score of 0.95 when all the groupthink symptoms were added together, while group two displayed 3.83 symptoms (Table 2). This was a significant difference between the two groups in an unpaired t-test ($t=1.97$, $p<.05$). Group one did not show a significant difference, from session two to session five. The mean score only increased from 0.95 to 1.43. Each of group one's sessions showed the following number of symptoms (from the most to the least); session three (Japanese students) 2.23; session five (abortion) 1.43; session two (Bulk funding (0.95); and session four (Maori ownership) 0.35.

Table 2. Mean number of each groupthink symptom per group member per session.

Session number	Group one	Group two	Group three
2. Bulk funding	0.95	3.85	N/A
3. Japanese students	2.23	2.30	N/A
4. Maori issues	0.35	5.08	N/A
5. Abortion	1.43	2.60	1.70

Group two also did not show a significant difference in the number of symptoms they displayed from sessions two to five. In order of greatest to least, group two displayed 5.08 symptoms for session four (Maori ownership); 3.83 for session two (bulk funding); 2.6 in session five (abortion); and 2.3 in session three (Japanese students). See Figure 3.

Bulk funding (1, $F=18.31$, $p< .001$) and Maori ownership (1, $F=49.47$, $p< .001$) were the only session topics which revealed a significant difference between groups one and two. There was no significant difference between group one and group two in the number of groupthink symptoms displayed in sessions three (Japanese students on campus) and five (abortion).

Group three scored a mean of 1.7 groupthink symptoms. This was not significantly different from group two (mean of 3.83) or group one (mean of 0.95) at session two. None of the three groups was significantly different from each other in the number of groupthink symptoms they displayed in session five. See Figure 3.

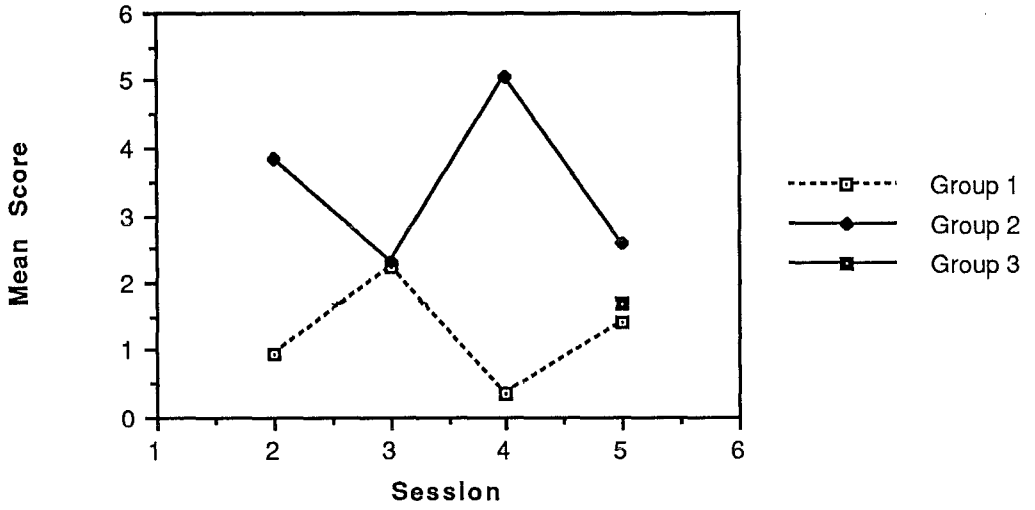

Figure 3. Mean score of symptom by group and session.

3.3.1 INDIVIDUAL SYMPTOMS

Both group one and group two recorded symptom three (stereotyping of outgroups), as the most frequently occurring groupthink symptom. (Figure 4, Table 3). This scored a mean of 8.95 combined, The next most frequent symptom was the rationalisation of negative information (symptom two) with a mean of 3.35, followed by symptom eight direct pressure with a mean of 2.22. Symptom four (morality), with a mean score of 2.08 was the fourth most common. Stereotyping was significantly more frequent than any other symptom using a post-hoc analysis with a Tukey HSD (7, 82.29, $p < .01$). See Figure 4.

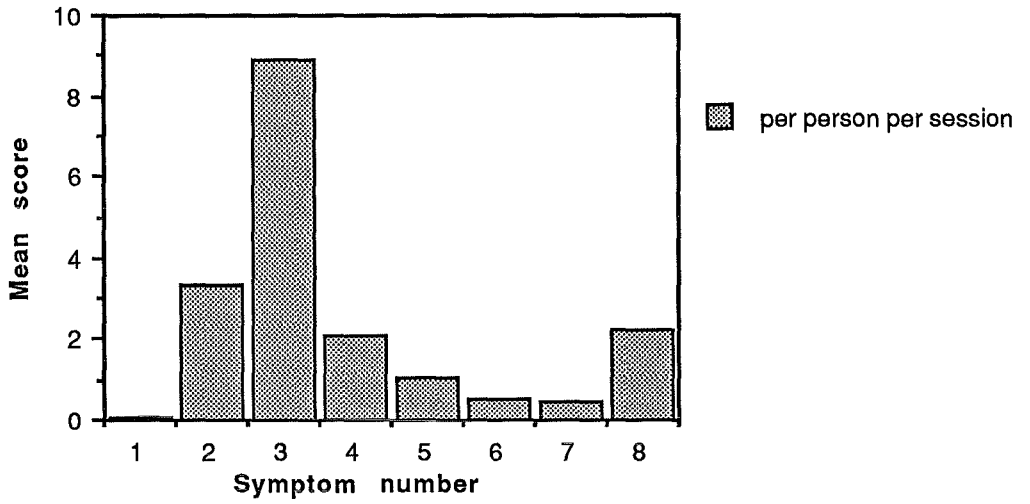

Figure 4. Mean score for each symptom for groups one and two combined, all sessions.

When groupthink symptoms were analysed individually there were significant differences between groups one and two. Rationalisation (6.1 for group one compared to 0.6 for group two), stereotyping (14.15 compared to 3.75) and morality (3.65 compared to 0.5) occurred more frequently in group two than in group one. Direct pressure (3.35 compared to 1.1) was recorded significantly more often in group one than in group two. The rationalisation of negative information (1, F=23.01, p< .001), stereotyping of outgroups (1, 82.29, p< .001), morality (1, t=7.549, p< .008), and direct pressure (1, 3.85, p< .05) were all significantly different between groups one and two over all sessions, and these four were the only symptoms to be scored to a level of significant difference (Figure 5).

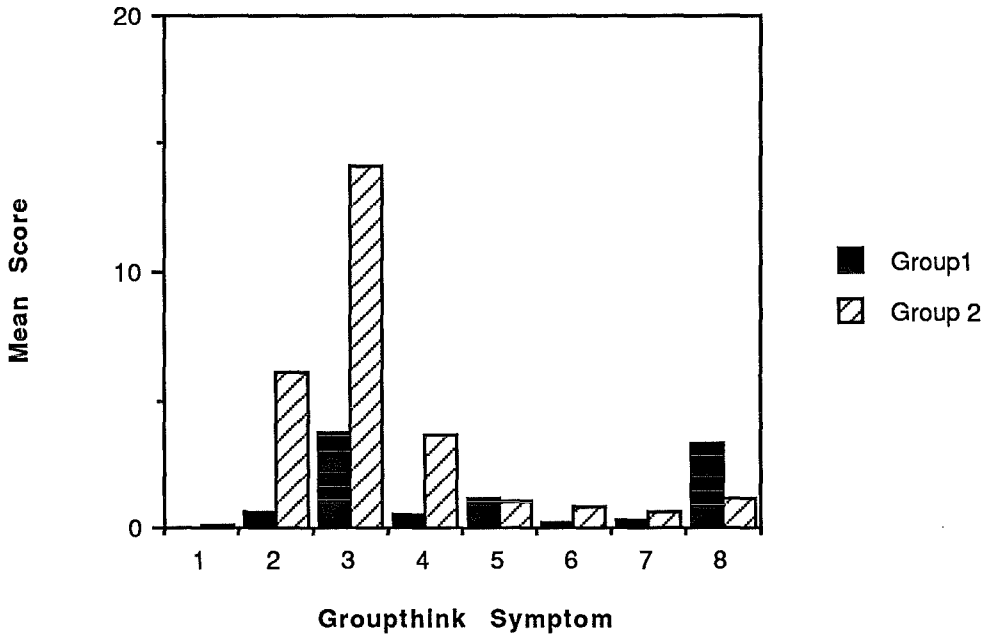

Figure 5. Symptom occurrence over all sessions of group one and group two.

An analysis of session five showed all three cohesion groups display different amounts of each symptom. It can be seen that stereotyping (2, $F=10.317$, $p< .001$) and direct pressure (2, $F=16.56$, $p< .001$) were the only two symptoms that showed a significant difference between the three groups. All three groups were statistically different (2, $F=5.78$, $p< .001$). While symptoms one (illusion of invulnerability) and seven (mindguarding) hardly occur at all, the remaining six symptoms occurred at low levels, with no significant difference between groups (Figure 6).

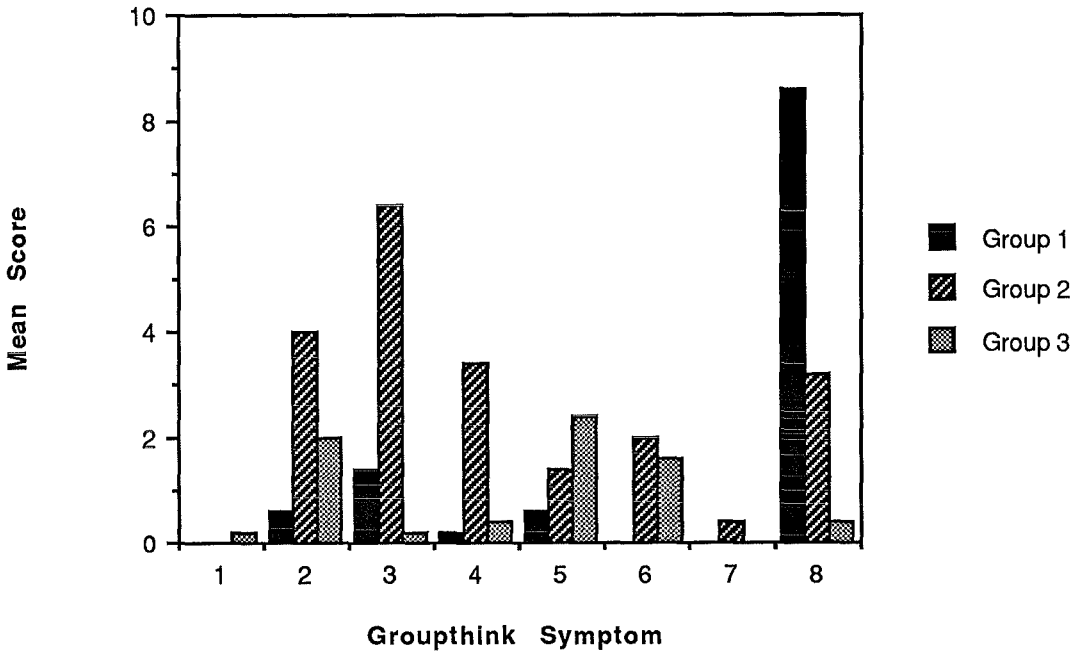

Figure 6. Mean score by symptom for all groups in session five.

3.3.2 SYMPTOM OCCURRENCE RATES

The illusion of invulnerability (symptom one) hardly occurred in any of the three groups. Of the four times it was recorded, three times were by group two and once was by group three. Group three was the only group to score any instances of it in the fifth session.

The lack of inherent morality was another symptom which occurred with greater frequency in group two than in group one. Group two scored 71 instances overall, while group one scored only seven. Group three's score of two in the final session was similar to group two's score of one.

The rationalisation of negative information was another symptom that occurred with a higher frequency in group two than in group one. As already mentioned, this was one of the few symptoms that did distinguish between the

two groups at any level of significance, with group two having an overall score of 121. This score was in part the product of a score of 84 in session four, and 20 in session five, each of these subtotals being larger than group one's overall total of 12. Group three also scored highly on this symptom, with a score of 10.

Group two scored more highly on stereotyping than on any other symptom, with 273 instances recorded. This was significantly greater than the 75 scored by group one, and the one instance scored by group three. In their fifth sessions, group one scored seven while group two scored 32.

Individual self censorship affected all three groups. Group one scored 23 instances over the four sessions, and despite a sharp increase in session three, maintained an average of 3.3 for the three sessions. Group two increased their instances from one in the first session to seven in the fifth. Group three however exhibited a relatively high 12 instances which was their highest score.

The illusion of unanimity was more frequent in group two than in group one, but not to a level of significance. However it was the third most common symptom for group three. Group one had a total score of five with no instances of this symptom in this group's final session. Group two's total score was 19, of which 11 occurred in the final session. Group three scored seven instances.

In their first session group one scored 43 statements which were categorised as examples of direct pressure. This was group one's second most frequent symptom, with a score of 65. This result was significantly higher

than that of group. Of the 22 cases recorded for this group, 16 emerged from the fifth session. Group three scored two, one of the lower scores.

In session five, group one and group three expressed no cases of mindguarding whereas group two displayed two.

When the transcripts of the sessions were analysed, mindguarding was a very infrequent symptom. No instances of mindguarding were present within group three and group one for session five. In contrast group two displayed two instances during session five. Group one scored a total of eight instances, and group two scored 12.

In session five, group one and group three expressed no cases of mindguarding whereas group two displayed two.

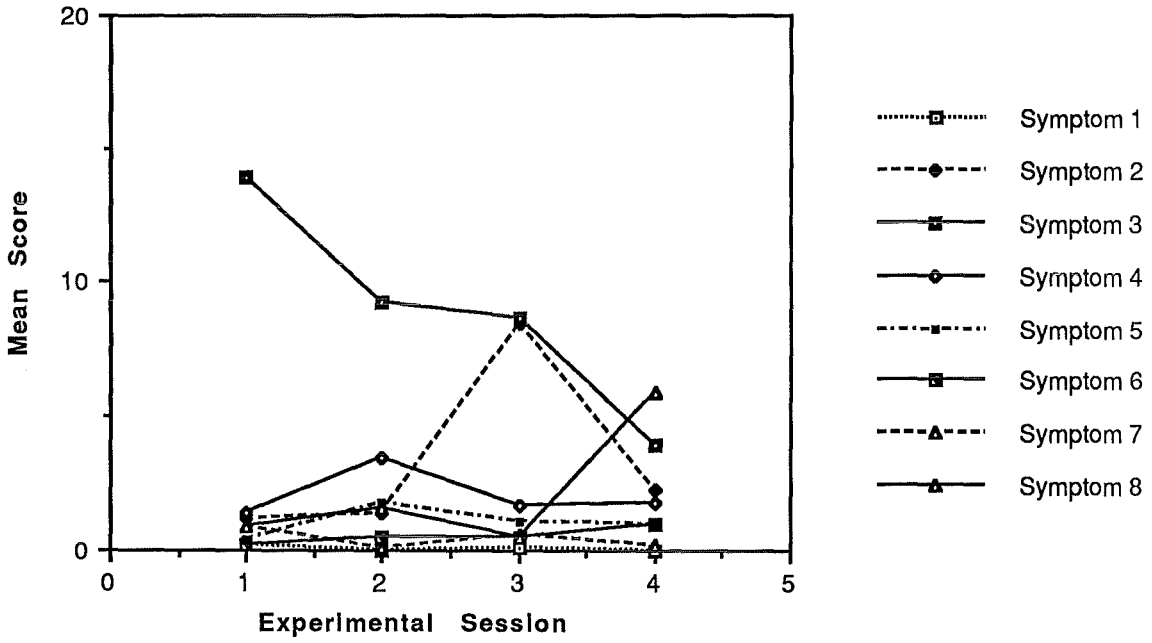

Figure 7. Groupthink symptoms by session.

Table 3. Symptom by group by session

Symptom	Group one	Group two	Group three
1. Invulnerability	0, 0, 0, 0	2, 0, 1, 0	1
total	0	3	
2. Rationalisation	2, 7, 0, 3	10, 7, 84, 20	10
total	12	121	
3. Stereotyping	15, 46, 7, 7	122, 47, 72, 32	1
total	75	273	
4. Morality	2, 4, 0, 1	12, 26, 17, 16	2
total	7	71	
5. Self censorship	3, 13, 4, 3	1, 4, 7, 7	12
total	23	19	
6. Unanimity	1, 1, 3, 0	1, 5, 2, 11	7
total	5	19	
7. Mindguarding	5, 3, 0, 0	3, 1, 6, 2	0
total	8	12	
8. Direct Pressure	8, 14, 0, 43	0, 1, 5, 16	2
total	65	22	
SESSION TOTALS	36, 88, 14, 57	151, 91, 194, 104	35
	195	540	

3.4 ON/OFF TASK DATA

The higher the score on the On/Off data the more time the group spent off task. The difference between the scores of group one and group two was not significant. There was no significant change for either group one or group two in relation to session two and five. By session five, the only significant difference between groups was that group two (mean score 28.16) was more frequently off task than group three, with a mean score of 13.88 (2, 3.71, $p < .05$). See Figure 8.

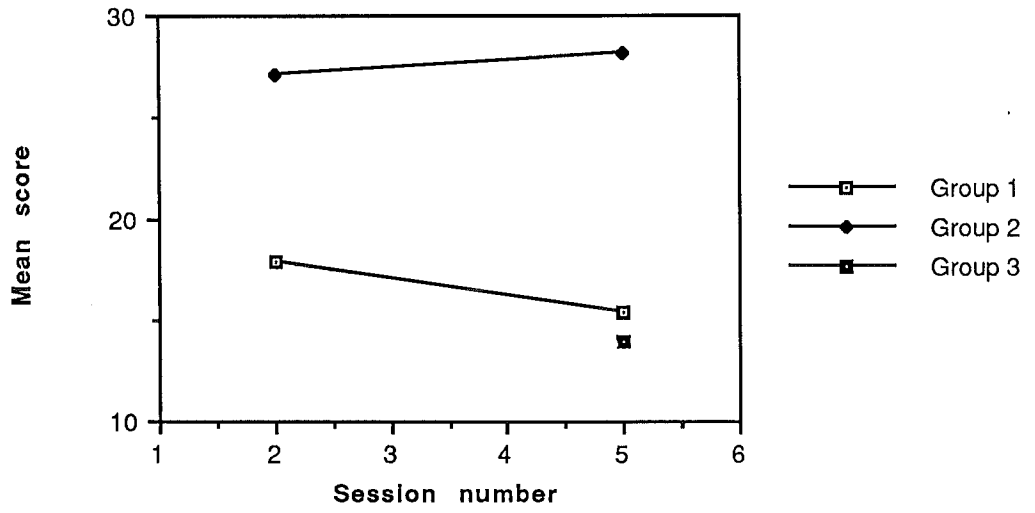

Figure 8. Mean number of off task scores per group.

3.5 OTHER RESULTS

The general trend between groups one and two was similar, despite a range of written comments (Figure 9). Group two consistently developed more written comments than group one. This trend between the two groups remained constant.

For the first session, group two suggested 34 possible discussion topics. These proved to be less controversial topics than those chosen by group one.

For example, group two suggested student allowances, Maori issues (remembering that all the members of group two were European), and lowering the drinking age. Group one suggested homosexual law reform, Christianity, and euthanasia (Appendix 4). For their first session, group one suggested 24 topics, six of which were not serious, but rather ingroup jokes. For example, "Does John produce clones?", the end of the world, and "the void" (Appendix 4).

The second session, revealed the greatest differences between group's one and two. For example, group one raised six points about bulk funding, while group two had 25 points about the same topic. In session five groups two and three expressed a similar number of comments (9 and 8 respectively) whereas group one were less productive with two written comments.

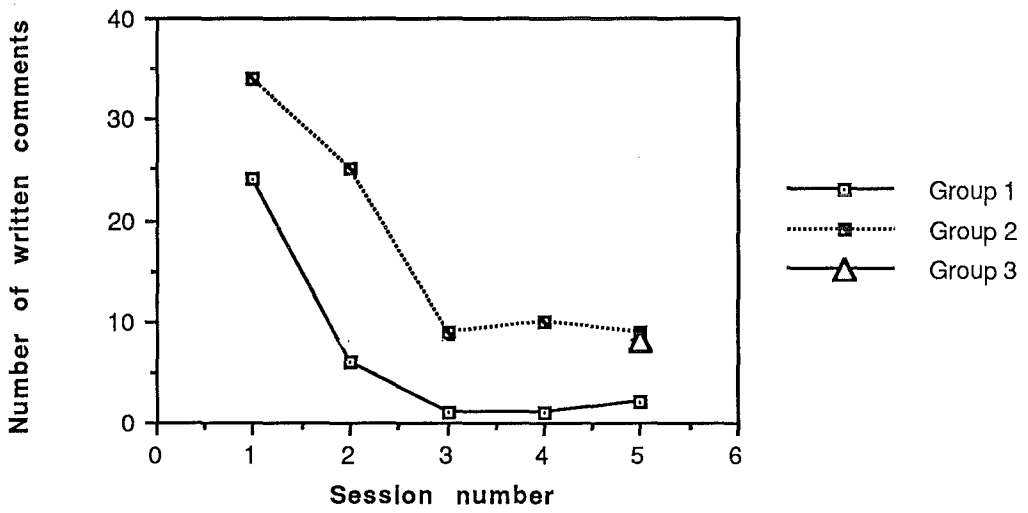

Figure 9. Written comments for each group in each session.

The time of completion for each session varied from group to group. Group three took the longest time to complete their session, taking 40 minutes and 11 seconds, while in sessions three and four group one took a mere 13

minutes and 48 seconds and 13 minutes and 37 seconds respectively. In general, group two took longer than group one to complete each session.

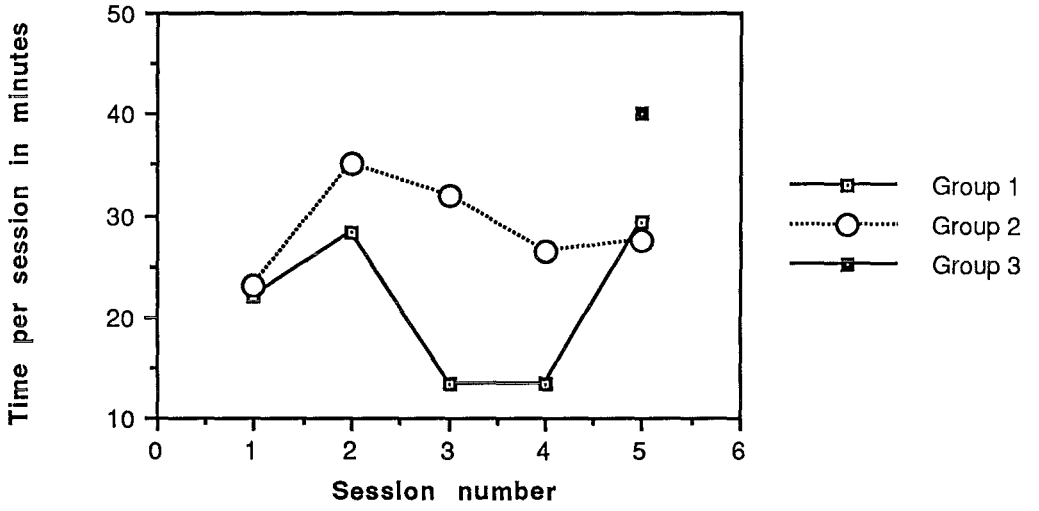

Figure 10. Time taken to complete discussion sessions.

CHAPTER 4
Discussion

The present study investigated two hypotheses. The first, was that the level of group cohesion would have a significant effect on the occurrence of groupthink symptoms. The second hypothesis was that the topic under discussion would have a significant effect on the occurrence of groupthink symptoms.

The results strongly support the existence of an effect of group cohesion on groupthink. However they are in opposition to Janis's (1982) predictions. In addition the results regarding the discussion issue were somewhat inconclusive. In summation, the present study provided strong support for the first hypothesis and some support for the second. Before addressing these results it was essential to test the groups for the expected levels of group cohesion (refer to methods section).

4.1 Cohesion

The present study contradicts previous findings about the relationship between cohesion and group performance. In the literature, there has been support for a positive relationship between the two. The present findings were that the High Cohesion Group did not create more recommended discussion topics than the low and non cohesive groups. This was in contrast to Cohen et al. (1960) who found that cohesive groups produced more ideas than non cohesive groups. It was also in contrast to numerous researchers who found cohesion to increase the productivity of work groups. (Dailey, 1977; Evans & Dion, 1991; George

& Bettenhausen, 1990; Greene, 1989; Mikalachki, 1969; Seashore, 1952; Summers et al., 1988).

Stodgill (1972) suggested that a cohesive group diverted their time into social behaviour and away from task behaviour. This finding was replicated in the present study. The generation of group discussion topics resulted in group one suggesting six frivolous topics (one quarter of all their recommendations) while group two did not recommend any. This is a good example of the different emphasis the two groups placed on the first session.

Judging from the above explanation, group one should have displayed a greater number of off task behaviours than group two. However this was not the case. The results were not as anticipated. There are two factors that may have influenced this result. Firstly the comments were coded on a five point scale, which may have excessively segmented the results. A three or even two point scale may have found a significant difference on this measure, and would be preferable in future research of this type. Secondly, group two had much longer discussion sessions than group one. This situation alone would be a factor both in the number of off task statements and the number of written statements created. Interestingly there were distinctive group differences in the content of the off topic comments. For example, group one discussed intragroup material, while group two tended to discuss more general matters.

A possible explanation for the lack of enhanced performance in the High Cohesion Group was the goal setting of each group (Bernthal & Insko, 1993; Hagstrom & Selvin, 1965). It appears that the High

Cohesion Group in this study had a group goal of enjoyment and money earning. In contrast, the Low Cohesion Group appeared to be more concerned with the achievement of the task at hand. This visible difference in the number of suggestions provided by each group, may be the best reflection of the different goal each group had set itself.

The suggestion of an optimal point in the cohesion/productivity relationship is supported within this study (Fisher, 1974). A group can be either too cohesive or not cohesive enough to experience an optimal relationship. In the present study group two performed to the highest level of all three groups, when that performance was measured by the number of suggested topics or the number of written comments created per session. The Low Cohesion Group produced more ideas, was more task focused, and spent more time on the decision process than the High Cohesion Group. Although they also exhibited more off task comments, the number of these comments is not in line with the time taken to complete the task. In terms of percentage of time spent on or off task, the results may be the reverse.

Although not directly measured, the two groups within the present study appear to display different types of cohesion (Bernthal & Insko, 1993; Drescher et al., 1985; Hagstrom & Selvin, 1965; Mikalachki, 1969; Zaccaro & Lowe, 1987). Group one was self created, spent their leisure time together, and had a selection of intragroup jokes. Simultaneously they displayed elements of both social and task cohesion. A reason for this was that the group had originated to achieve tasks set by the Christchurch College Of Education.

In comparison, groups two and three exhibited task orientated cohesion. Their formation was for the purpose of the experimental procedure. Because of the above, group one had different goals to those of group two and group three (social versus task satisfaction). The above could be used to explain why the different forms of cohesion displayed by the experimental groups resulted in certain trends. For example, as a highly task orientated group, group two had longer discussion sessions and created more written comments than did group one.

4.1.2 Group Cohesion Differences

The results indicated that the three groups were indeed different in the amount of cohesion they displayed. An examination of the two questionnaires used depicts this finding. The group questionnaire gave overwhelming support for the presence of different cohesion levels within the three groups. Group one had much higher levels of cohesion than either group two or group three. Group one also received substantially higher scores than group two at the first session, with an average score of 6.02. This indicates that group one had a high level of cohesion prior to undertaking any experimental sessions. This group was therefore naturally cohesive and did not require an experimental manipulation to give the appearance of cohesion. This group was chosen for the study on that basis.

Group one maintained its high cohesion score through to the fifth session, although its cohesion level did not increase. Both of group one's first and fifth session scores were significantly higher than the scores for group two. Group two began the sessions with a score of only 4.06, which was clearly below that of group one. Unlike group one, there

was a significant increase in group two's cohesion scores over the course of the study. Despite this increase, group two did not achieve the same cohesion level of group one. The rise in group two's cohesion is quite remarkable considering that in total it existed for less than four hours.

The visible increase in the cohesion scores for group two can be explained by the "false cohesion" effect described by Longley and Pruitt (1980). They argued that apparent cohesion sometimes occurred early in the life of a group and acted to give the impression of a cohesive group. This effect occurred when the group did not experience an intimate relationship such as Janis (1982) definition of cohesion required. Arguably, the concept of false cohesion offers a valid explanation as to why authors have not focused on high cohesion in the performance of group tasks. In these studies, false cohesion may have developed very early in the history of the group, with the researcher accepting this apparent cohesion as genuine.

The members of groups which display false cohesion may make incorrect assumptions about each other and even break unspoken rules in their interactions. This effect was visible within group two. The members of group two appeared cautious about expressing any controversial ideas, while the members of group three were even more reluctant.

False cohesion may also explain how some researchers have managed to create cohesive groups, by the manipulation of subjects into short term groups. It is not until one of these artificially created groups is compared to the cohesion of a real world group such as group one, that the difference in the cohesion levels of each is perceivable. This finding

clearly displays the pitfalls of using a manipulated group. This methodological failing is the main reason the relationship between cohesion and groupthink is still debated. In addition it must be noted that although group two was not manipulated, it was created for the purpose of this study.

The results of groups one and two emphasize the methodological shortcomings of previous research which has attempted to manipulate cohesion. As these two groups had significantly different cohesion levels after five discussion sessions, it appears impossible for a group to develop a cohesion level in one session which provides an adequate test of Janis's (1982) theory. However this has not stopped several researchers from using this method (Berkowitz, 1954; Kroon, Krevelo & Rabbie, 1992; Zaccaro & Lowe, 1987).

In their first experimental sessions, group two and group three each had cohesion levels that suggested they came from the same population. It can therefore be assumed that the results of group three in session five are similar to the results group two would have obtained for the same topic if they had discussed it first. The different cohesion levels for each group in the fifth session, the discussion of abortion, shows that attempts to observe three different levels of cohesion for this session were successful. That group one was significantly different from the two other groups in session five has already been mentioned. This result therefore supports the experimental assumption the groups were high, low and non cohesive as expected.

4.1.3 Cohesion Differences By Question

When the group questionnaire was assessed, an interesting trend emerged among the individual questions. A common theme was the willingness to express personal information within the group, and this was evident in the answers to questions 7 and 8. In the first session these two questions were scored more highly by the first group than by the second. This result supported the findings of Peteroy (1983) and Stokes et al. (1983), both of whom found that members of cohesive groups were more willing to disclose confidential information about themselves than were members of non cohesive groups.

In the present study, the tone of the discussions was certainly more intimate within group one than group two. The one factor which ultimately differentiated between groups one and two was the group members tendency to confide in the group as a unit. This was the most important factor that distinguished between the High Cohesion Group and group two, (the Low Cohesion Group), which displayed false cohesion.

Similarity as a variable of cohesion was not corroborated by the answers to question five ("The members of this group have similar opinions to me"). This is contrary to the idea that the similarity of group members is a key factor in cohesion (Good & Nelson, 1971; Lott & Lott, 1965; Szilagyi & Wallace, 1983, in Summers et al.,1988; Zander, 1979). Questions 1, 2 and 3, tested the concept of the group member's attraction to the group. Again, the results for these questions were surprising, as there was no differentiation between the groups (Cartwright, 1968; Drescher, Burlingham & Fuhriman, 1985; Festinger, 1950; Hogg, 1987;

Johnson, 1981; Lott, 1961; Mikalachki, 1969; Wheeless et al., 1982). Although the sample sizes for this study are insufficient to permit generalization of the findings, the attraction to group definition of cohesion was certainly not supported.

In addition, the answers to Questions 4, 6 and 9 which dealt with the closeness of the group as a whole (the field of forces definition of cohesion), did not discriminate between groups one and two as expected. Again caution is required when generalising from these results due to the small number of subjects. However, these findings failed to provide support for the"field of forces definition of cohesion (Festinger, 1950; Piper et al., 1983; Piper et al., 1984; Schachter et al., 1968). Simultaneously the present conclusions do not corroborate past research which also suggests that concepts such as *"bondedness"* (Mudrack, 1989; Piper et al., 1984) *"solidarity"* (Mudrack, 1989; Wheeless et al., 1982), *"we-ness"* (Forsyth, 1990; Libo, 1953; Owen, 19485) and *"group spirit"* (Fisher, 1974; Owen, 1985; Staw, 1975; Stogdill, 1972) indicate cohesion.

Furthermore a feeling of active involvement (question ten) was not found to distinguish a cohesive group from a non cohesive group. This was despite findings to the contrary by Bollen and Hoyle (1990), Bugen (1977), and Good and Nelson (1971). The group members' level of activity within group interactions did not impact on their perception of group cohesiveness.

Questions 11 ("I have enjoyed my previous contact with this group") and 13 ("I have known the other members of this group previous to this meeting") were used to obtain some of the information necessary to

select group one. These questions were completely biographical. Further measures of the history of the group were contained within questions 14, 15, and 16 which requested biographical data on the length of time the group members had known each other.

4.1.4 Issue Experience

The members of group two were more honest in their discussions than were the members of group one. This can be seen by the answers each group gave to the issue questionnaire. This finding is contrary to that of the previous section. In the above section, the High Cohesion Group was more comfortable discussing intimate information within the group than were the two groups with lower cohesion levels. An explanation for this apparent contradiction lies in the task before the groups. The experimental task of the groups did not require the expression of personal information, only issue relevant information. Any confidential information which was revealed was done spontaneously and without experimental prompt. This occurred with greater regularity in group one, although the members of group two were more honest in expressing their task relevant opinions.

In contrast to the above, Janis (1982) would have expected the High Cohesion Group to more readily express their opinions on the issue at hand than the Low Cohesion Group. The results of the present study lead to the reverse conclusion. Instead of group members feeling comfortable and confident enough to be honest with their friends, they have appeared more reserved within a cohesive group. Maybe the strength of the group opinion is too strong for them to challenge. The power the group has over them in the long term, reduces the group

members ability to deviate from the group position. A conclusion to be drawn here is that since the Low Cohesion Group had no capacity to reprimand its members, these members had greater freedom to express themselves. However, in a completely non cohesive group, the group members are tentatively testing the reactions their suggestions draw, and are hesitant in their verbalised comments. This is one example of the Low Cohesion Group performing at a superior level to the High Cohesion Group.

Group two initially devised substantially more topics than did group one. They also created a great deal more written suggestions for each discussion topic. Interestingly the topics each group suggested were of a different nature. The topics suggested by group two were less controversial than were those suggested by group one (Appendix 4). Whereas group one recommended topics such as abortion, Christianity, legalising marijuana and euthanasia, group two suggested Maori issues (remembering that all of the group members were European), student allowances and bulk funding. Although these are only examples, there was a tendency for group two to suggest issues that would permit a consensus. The members of group two appear to have been careful not to suggest topics that would offend their fellow group members, or cause them to enter into a situation where they would come into conflict.

These findings correspond with the above conclusions, as the discussion topics were selected in the first session. Group two were cautious not to offend the other group members before they got to know them. This is comparable with the finding that group three attempted to maintain intragroup stability by not arguing during their session, and taking a moderate stance on abortion. Hence, there is further evidence of

a false cohesion effect occurring in group two. Whereas group one was cohesive and group three was not, group two had some level of cohesion. To the casual observer they may appear to match the behaviour exhibited by a highly cohesive group but this form of analysis suggests otherwise.

4.2 Groupthink Symptoms

The first hypothesis was supported by the results. The level of cohesion did have a significant effect on the occurrence of groupthink symptoms. This result was found to be in opposition to Janis (1982), since the Low Cohesion Group experienced more groupthink symptoms than the High Cohesion Group. This result coincided with the findings of the majority of research which has tested the groupthink theory (Callaway & Esser, 1984; Leana,1985; Longley & Pruitt, 1980; Moorhead & Montanari,1986). Further, not all of the eight symptoms of groupthink have been supported in the present study (Hensley and Griffin, 1986; Manz and Sims, 1982; Montanari and Moorhead, 1989).

4.2.1 Cohesion Based Groupthink Differences

Despite attempts to recreate Janis`s antecedent conditions, this finding has been consistent throughout research on groupthink theory (Leana,1985; Longley & Pruitt, 1980; Moorhead & Montanari, 1986). As already mentioned. the use of groups most accurately described as displaying false cohesion, has lead to a lack of support for the theory in general.

Group two achieved the highest groupthink score for each session, and consistently maintained higher frequencies of groupthink than did group one. Figure 3 shows the scores for group one and group two are a mirror image of each other. For the sessions in which group one received a relatively high score, group two scored relatively low. At no time did group one achieve a higher score than group two, while over sessions two to five the difference in the scores was marked. This result likewise opposes Janis's (1982) predictions, but not the findings of other researchers (Leana, 1985; Longley & Pruitt, 1980; Moorhead & Montanari, 1986). Group one's low frequency of groupthink symptoms is placed in perspective by the fact that in three out of four sessions they displayed fewer symptoms of groupthink than did group three in session five.

These findings provide support for Fisher (1974) who suggested that cohesion and performance had a curvilinear relationship. As cohesion increased so did performance, before it plateaued, and then decreased. This theory explains the finding of the present study, as group one consistently produced fewer written comments than group two. Therefore group one may have exceeded the optimal point of cohesion, and thus been less productive than group two.

Although group one increased the number of groupthink symptoms they displayed between sessions two and five, there was not a consistent pattern over the four sessions. The pattern of group two also varied, but as already noted, was in opposition to the pattern of group one. Although neither group one or group two changed the number of groupthink symptoms they displayed over time, they were different from each other. Group three was also different from group two in group two's fifth session.

The conclusion derived is that cohesion did influence the occurrence of groupthink.

4.2.2 Groupthink Symptoms

Having determined that there was indeed a difference in the number of groupthink symptoms each group displayed, the next issue that needs to be addressed is the question of which symptoms were the most frequent.

Again there is a clear answer. Stereotyping was by far the most common symptom across all three groups, and of all measures taken. This finding agrees with Hensley and Griffin (1986) and Manz and Sims (1982), who also found evidence of stereotyping as a key symptom within groupthink. The second most frequent symptom within the present study was the rationalisation of negative information, which has also been previously supported in the literature (Hensley & Griffin 1986; Manz & Sims, 1982; Montanari & Moorhead, 1989). The third most frequent symptom was direct pressure (Hensley & Griffin, 1986; Manz & Sims, 1982). Previous studies have also found support for the importance of self censorship, morality and the illusion of invulnerability. However these symptoms were not frequently found within the present study (Hensley & Griffin, 1986, Manz & Sims, 1982; Montanari & Moorhead, 1989). For example, the illusion of invulnerability was supported by both Terborg et al. (1976) and Thompson and Carsud (1976, in Callaway & Esser, 1984) was a symptom which rarely occurred within the present study.

Significantly group two displayed more rationalization, stereotyping and morality behaviours than group one. However, group one displayed more direct pressure than group two. That group one made use of direct pressure indicates that consensus was important for this group, and members who did not conform to the group norm were placed under pressure until they did. The continuity of the intragroup relations, made the use of direct pressure more acceptable. Pressure was applied to low status group members in order to maintain group consensus.

4.2.3 Symptom By Symptom

Although supported by previous research (Hensley & Griffin, 1986; Montanari & Moorhead, 1989; Terborg et al., 1976; Thompson & Carsud, 1976, in Callaway & Esser, 1984), the illusion of invulnerability was not found to have importance in the present study. In fact this symptom hardly occurred at all in any of the three groups. The experimental design may have affected the visibility of the illusion of invulnerability. This is one symptom more likely to occur within the political arena than elsewhere. However, as the occurrences of the illusion of invulnerability were extremely low, it appears likely that this is a valid finding.

A lack of concern for moral and ethical dilemmas caused by the group`s chosen course of action, is known as a lack of inherent morality. Group two obtained their third highest score for this symptom and scored significantly higher than group one. In contrast, group three's score for this symptom was one of their lowest. The relative absence of a lack of morality did not lie with the discussion topics, as there were no changes within the groups between sessions. That the symptom of inherent morality did not occur more frequently within the discussion of abortion

than in any other session, gives support to the evidence that this is not an important symptom within the groupthink theory (Longley & Pruitt, 1980).

Stereotyping behaviour was characterised by simplistic and negative assumptions of the outgroup. Why stereotyping behaviour occurred so frequently in group two is not completely clear. It appears that this group considered itself above moral criticism, however the group members may have not seriously considered actioning their recommendations. This result supports those researchers who have found that although groupthink may occur, it is more common in low cohesion groups than in groups with high levels of cohesion. This result further refutes Janis (1982) assumptions. Possibly the high number of stereotyping comments made by group two was an attempt at increasing the cohesion within the group. Normal thought processes may have been responsible for making stereotyping the most frequent symptom. A natural tendency to categorise people was expanded in order to establish to whether the group members shared the same opinions.

Group two's high score on the stereotyping symptom could be due to an attempt at bonding within the group. By verbalizing common assumptions, group members may have increased their cohesion level. Within group one stereotyping was not required, as the group members already knew each others attitudes. Despite this assumption, the abortion discussion did bring out some opinions which surprised the other members of group one. Simultaneously, group three had never previously met and were uncertain of the reactions other group members would have towards controversial statements. An interesting trend was for group two to make more stereotyped statements in the second, rather than the final session. This could be due to the fact that the relatively new

group was discussing bulk funding, a topic on which they would almost certainly agree. This near certain agreement on the discussion topic enhanced the stereotyping behaviour of the group. In this situation, group bonding could easily occur as the group members found they had a common opinion.

One symptom which divided the three groups was the collective rationalization of negative information. This occurred in order to prevent the groups preferred alternative solution being discredited. This symptom rarely occurred within group three, occurring with only half of the frequency with which it occurred in group two. Over all five sessions, group two displayed more examples of this symptom than did group one, with a frequency second only to that of stereotyping. The difference between groups one and two for rationalization was huge, and in the region of 9:1. But why was this symptom so prevalent in group two? One explanation for this effect is that the members of group two attempted to appear involved in the discussion, but avoided creating any disturbance. Thus, they phrased their opinions in a manner consistent with rationalization. For example, members of group two would frequently make a point and then make a comment which rationalized what they had just said. Rationalization has previously received support within groupthink research (Hensley & Griffin, 1986; Manz & Sims, 1982; Montanari & Moorhead, 1989), however in the present study it decreased as the cohesion levels rose.

The illusion of unanimity was another infrequent symptom. The actual scores for this symptom were very low because it was not easy to score from individual comments. The illusion of unanimity was said to occur when one group member was silent for a period of time, or

developed a pattern of non committal responses, such as "mm" and "yeah" only when pressured to respond. The results of the present study regarding the occurrence of the illusion of unanimity agreed with the findings of Manz and Sims (1982). The only other support for this symptom within the groupthink model comes from case studies similar to those used by Janis (1982), which have already been shown to be inadequate. The illusion of unanimity has not commonly been supported in the literature, and in the present study it was more prevalent in the Low and Non Cohesion Groups than in the High Cohesion Group. This was a particularly common symptom within group two, as the members of this group frequently lapsed into periods of endless "mmm`s" without any real confirmation.

Within groups one and two, self censorship behaviour was recorded infrequently. The fact that it was the most common symptom for group three is however important. The present study found that self censorship occurred with greater frequency in the lower cohesion groups than in the High Cohesion Group (Hensley & Griffin, 1986; Manz & Sims, 1982; Montanari & Moorhead, 1989). It also occurred more frequently when all group members publicly announced their agreement with the group position, as opposed to their private agreement.

Direct pressure was applied to group members when they expressed doubts related to the dominant group position. In group one, most of the direct pressure came from the dominant group "leader" and was directed at one group member in particular. This was the only case where group one scored a significantly higher frequency of any symptom than group two. The presence of this symptom as one of the characteristics of groupthink was supported in Hensley and Griffin (1986)

and Manz and Sims (1982). Marked differences also appeared between groups one and two in the present study. Within both group one and group two, the greatest frequency of direct pressure was in session five. Once one opinion dominated the conversation, the groups actively discouraged further discussion through the use of direct pressure.

This conclusion was represented in the dynamics of group one. This group had a clear structure and hierarchy, with one member who was more conservative than the rest. As a result, when this group member raised any opposition it was quickly squashed by more dominant group members. Arguably, this may not be a group dynamics statement, but rather a comment on the cohesion process. That is, as a group increases its cohesion, a hierarchy develops within the group and low status members cannot challenge those higher in the hierarchy.

Finally, the symptom of mindguarding which related to the prevention of disruptive information being presented to the group, was represented infrequently in this study. Often a group member may be aware of something which would cast doubt on their personally preferred position. In order to maintain group consensus with their preferred alternative, the information is not shared within the group. Mindguarding was recorded infrequently when scored from observational data. However in the issue questionnaire, two members of group one reported withholding information from the group. This was the same frequency as within group three. No members of group two reported withholding knowledge. These results repeat the suggestion that cohesion has an optimal point on a curvilinear graph. Apparently the cohesion level of group three was too low to permit total honesty within the group.

4.2.4 Groupthink And The Literature

The results of a symptom by symptom analysis of groupthink have previously shown empirical support for several symptoms of groupthink. It is now necessary to determine how the findings of this study relate to past literature. The main result of the present study was in opposition to Janis's (1982) assumption that high cohesion is a necessary prerequisite of groupthink (Callaway & Esser, 1984; Flowers, 1977; Tetlock et al., 1992). Many previous authors have found results similar to those here, which suggest that in fact low cohesion produced more groupthink symptoms than did high cohesion (Leana, 1985; Longley & Pruitt, 1980; Moorhead & Montanari, 1986). This finding is by no means unusual and is more common in the literature than is support for cohesion. Those studies which do consider cohesion important are primarily case studies similar to those used by Janis (Esser & Lindoerfer, 1989; Janis, 1986; MaCauley, 1989; Moorhead, Ference & Neck, 1991; Smith, 1984).

This finding has been a cause of concern amongst researchers. The end result has been that only cases which at first glance appear to suffer from groupthink have been investigated further (Neck & Moorhead, 1992). The selection of events for study using the groupthink framework, has been based on the initial impression of the researcher. Research attention has been directed towards events which the researcher has already concluded fit the model. The result has been a mass of studies designed to confirm the authors first impressions regarding an event, rather than objective empirical studies. There does not appear to be any case studies of groupthink which have not supported the theory.

4.3 Issue Effect

The effect of the discussion topic on groupthink was not as conclusive as was the effect of cohesion. A comparison of the results for group one and group two finds no difference in the occurrence of groupthink symptoms by session. Topic alone has not had an effect on the occurrence of groupthink symptoms. However, these results are assessed by group this finding changes. As in Kerr (1992), the High Cohesion Group in the present study came to an agreement more easily than did the Low Cohesion Group, with agreement measured by the length of the discussion sessions.

4.3.1 Research On Issue Importance

Bulk funding was a topic relevant to all of the subjects, and was discussed at length by both groups. Abortion was also discussed for a greater length of time than most other topics. A reason for this was the moral dilemmas it created for the subjects. Therefore, support was found for previous findings that personally relevant or controversial topics received greater attention than did irrelevant topics.

The abortion topic was obviously important to many of the group members, as at least one group member disclosed personal information regarding the topic in each group. In most cases (14 out of 15 subjects) the subjects reported previously discussing this issue with others. Also supported here was the suggestion that a newly formed group would address task demands before social requirements when placed under time constraints (Shure et al., 1962). Although group two increased its off task behaviour for session five, this increase did not correspond with the

time taken to reach agreement or the number of written comments created. This suggests that the initial impression that group two increased its off task behaviour is untrue in terms of percentage time off task.

4.4 Contributions And Limitations Of The Present Study

The present study has addressed several of the defects of previous research. Firstly, the present methodology involved the selection of an existing cohesive group that met the strict requirements of cohesion as laid down by Janis (1982). By using a group which fitted Janis's definition of cohesion, his theory could be empirically tested with accuracy. The groups may not have had a political or business orientation, but Janis did claim that groupthink would apply outside of those fields.

Secondly, the topics chosen for discussion were generated by the subjects themselves, so that the groups were discussing issues of relevance to them. This was considered preferable to the use of irrelevant business tasks. The group members discussed a topic with which they had experience, and this enabled a personally applicable discussion.

Thirdly this study addressed an aspect of groupthink that has not been satisfactorily assessed previously, namely the discussion topic. The effect of the discussion topic was considered to have a potential influence on the occurrence of groupthink symptoms. The present findings create

concern regarding the quality of any decision made by individuals not directly affected by the outcome.

A fourth factor that this study addressed was the measurement of both cohesion and groupthink. Cohesion was measured using two questionnaires designed from a selection of cohesion definitions. Groupthink was measured by studying the transcripts of group discussions, to search for statements that complimented Janis's (1982) definitions. In both instances, these measures were vastly superior to those used in previous research, and were able to provide more valid results than any other available measures.

One limitation of the present study is that no generalisation of the results is possible. This is due to the presence of only one group in each of the high, low, and non cohesion conditions. This study will not stand out as a definitive work, but rather as a guide for further research. The study had originally been designed to include a greater number of groups, but obtaining groups which fitted the necessary criteria was extremely difficult. Groups which had a longer history than group one's eight months would also be preferable, if they were amenable to observation.

The main methodological criticism of this study is that the groups were asked to make only a recommendation to a higher decision making authority. The instructions should have emphasised that the groups were to be the final decision making authority. However, the problem with this method is that the experimental condition would lose much of its realism. The alternative is to use a real political decision making group, which creates further technical difficulties.

Finally, in unison with other researchers, the present study used the averaging of individual measures to attain a group score for cohesion. Having criticised such methods, they can only be defended through the difficulties of using any other experimental measure. The only other way to create a valid measure of group cohesion would be to have the group as a unit decide their answers to the group questionnaire. Again, such methodology creates new problems.

4.5 Recommendations For Future Study

The main recommendations that arise from these results involve addressing the limitations of the present study. Firstly, the use of only one group per condition has limited the generalisability of the data. Although the findings proved significant in most cases, the sample sizes in future studies should be increased. A follow up study would therefore be a very large task indeed.

Secondly, groups with a longer history, and a different background might provide different results to those obtained here. The subjects used here were mainly College of Education students, and a different type of subject may provide different results. A group with a longer history than eight months would also be preferable. However the group used here was sufficient. A further reason for this finding is that groups are dynamic and changeable. As such, it would be worth studying these groups for a longer period, to assess the changes that occurred over time.

This leads to the third recommendation, which is that the dynamics within groups one and two were dependent on the study's longevity.

Under what circumstances would group two develop a cohesion score equal to that of group one? Would their productivity have been affected if they had? These questions and several others of a similar nature could have provided valuable data.

Relationship dynamics between group members were also fascinating. However, due to the enormity of the task at hand, many qualitative group dynamic observations have been omitted from mention. These findings, such as one group member who spontaneously displayed devil's advocate behaviour, could be well worth addressing in future research.

Alterations to the methodology used may also produce more substantial findings. For example, wording the instructions to firmly direct the subjects towards making the final decision on the issue is required. However, it must be noted that this would reduce the realism of the study unless the group members could realistically be expected to make such decisions under natural conditions.

In summary, the recommended direction for future research is to follow the methods used here. An increase in subject or group numbers in each experimental condition, and the longevity of the study, are the two main alterations that need to be made to provide data whose results can be used to create generalisations.

CHAPTER 5
Conclusions

The findings of this research do not support Janis's (1982) Groupthink model of cohesion. A reason for this was that the Low Cohesion Group experienced more symptoms of groupthink than the High Cohesion Group.

Further more, this study found support for only four of Janis`s groupthink symptoms. These symptoms were the rationalisation of negative information, stereotyping of outgroups, lack of inherent morality and the use of direct pressure upon group members. Significantly these behavioural symptoms occur with greater frequently in the Low Cohesion Group than the High Cohesion Group .

The impact of the discussion topic on groupthink had no effect within this study. The actual number of groupthink symptoms did not change with the controversiality of the topic. Interestingly, participants generation of discussion topics resulted in longer periods of time spent on personally relevant topics.

This study primarily supports Fisher's (1974) curvilinear model. His theory of an optimal level of cohesion to achieve maximum productivity provides an excellent explanation of these results. In addition Longley & Pruitt's (1980) concept of false cohesion figured predominantly with the low cohesion groups. This was in contrast to previous research which equated such a finding to high cohesion groups.

Although Janis's (1982) key antecedent of cohesion was not supported in this study, this should not detract from the validity of his

theory. Ultimately the present findings should not be used for excessive generalisations, but they do suggest that four symptoms of Janis's (1982) groupthink model influence group decision quality.

In summation, the current findings add to our knowledge of human behaviour. In particular, they highlight the relationship of individual interactions to the group decision making process.

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Appendices

Appendix 1.

GROUP QUESTIONNAIRE

1. I like working with this group.						
1 Not at all	2	3	4 Undecided	5	6 It's O.K.	7 Very much
2. I would like to work with this group again on a similar exercise.						
1 Definitely not	2	3	4 Not bothered	5	6	7 Very much
3. I like the members of this group as people.						
1 Not at all	2 Not really	3	4 Not concerned	5 They're O.K.	6 Quite a lot	7 Very much
4. This group works well together.						
1 Not at all	2	3	4 Satisfactorily	5	6	7 Very much
5. The members of this group have similar opinions to me.						
1 Not at all Much dispute	2 Some dispute	3	4 Good discussion	5	6	7 All have exactly the same opinion
6. We are a group of close friends.						
1 Not at all Don't like each other	2	3	4 Never met	5	6	7 Extremely good friends
7. I would tell members of this group some personal information about myself.						
1 No	2	3	4 Possibly	5	6	7 Definitely
8. I would tell members of this group private, confidential information about myself.						
1 No	2	3	4 If there was no one else	5	6	7 Yes

9. There is good group spirit amongst this group.

1	2	3	4	5	6	7
No			Moderate			Yes

10. I feel an active member of this group.

1	2	3	4	5	6	7
No			I have some blnput			Yes

11. I have enjoyed my previous contact with this group.

1	2	3	4	5	6	7
Not at all	1		No previous contact			Very much

12. I wish to see the other group members outside this group..

1	2	3	4	5	6	7
No			Maybe			Very much

13. I have known the other group members previous to this meeting.

1	2	3	4	5	6	7
No	Seen before	Met once	Slightly			Very well

14. For each member of your group please write their name and how long you have known that person.

I have known

_____ for _____ (days weeks months years)

_____ for _____ (days weeks months years)

_____ for _____ (days weeks months years)

_____ for _____ (days weeks months years)

15. For each member of your group please write their name and indicate approximately how many hours a week you would spend with them in class or study time.

1. _____

2. _____

3. _____

4. _____

16. For each member of your group please write their name and indicate approximately how many hours a week you would spend with them in social activity
1. _____
2. _____
3. _____
4. _____

17. Please indicate how many of the group you would consider close friends.					
1	2	3	4	All	None

ISSUE QUESTIONNAIRE

1. a) Previous to these meetings, have you discussed any of the following issues?

Bulk Funding	(Y / N)
Japanese Students	(Y / N)
Maori Claims	(Y / N)
Abortion	(Y / N)

b) If yes, with whom? (Group member; Non group member but affected by issue; Family member; Friend etc.) Please specify.

c) Did your previous discussion coincide with the group outcome? Please specify.

2. a) Have you discussed any of the following issues since the group meetings?

Bulk Funding	(Y / N)
Japanese Students	(Y / N)
Maori Claims	(Y / N)
Abortion	(Y / N)

b) If yes, with whom? (Group member; Non group member but affected by issue; Family member; Friend etc.) Please specify.

c) If yes did you discover anything you did not know? Please specify.

d) Did your opinion change, after the close of the meeting? Please specify.

3. During any session, did you know any information you withheld? If yes, Why?

4. Did you disagree with the group at anytime, but not say so? If yes, Why?

5. Did you agree with all the group's positions? Please specify.

6. Did you disagree with the group at anytime, and say so? Please specify.

7. a) Have you had any second thoughts, after a meeting, that the group position maybe wrong? Please specify.

b) Have you since raised these doubts in the group, either informally or during a group session? Please specify.

Appendix 3.

symptoms of groupthink

group number -

session number -

symptoms	s.1	s.2	s.3	s.4	s.5
1.illusion of invunlnerability					
2.rationalization of negative information					
3.stereotypes of outgroups					
4.assumptions of morality					
5.self censorship					
6.illusion of unamity					
7.mindguarding					
8.direct pressure					

individual totals

Appendix 4 A.

GROUP DISCUSSION TOPICS

(Group One's List)

College
Associates on Section
Accommodation for Japanese students
Capitalist

3rd Section

Abortion

Prisoners
P.A.R.S.
Ways prisoners are dealt with
Death penalty

Bulk Funding
Individual Contracts

Homosexual Law Reform

PPTA join?
Unionism

Recycling within college

Authoritarian teaching vs Liberatory techniques

Does John produce clones?

Christianity vs Antichrist

Void

Legalising marajuana

End of World

Euthanasia

3rd World vs Western development resource use

Teaching vs Learning

Sexist issues

Driftnet Fishing

Torture
pros and cons

Appendix 4 B.

GROUP DISCUSSION TOPICS

(Group Two's List)

Bulk Funding	
Student Fees	Have or not
	Flat fee or other
Student Allowances	Means testing
	Age
Cafeteria	Food

Socialising between tutor groups

Socialising between divisions

Selling alcohol on campus

Lack of computers

Photocopiers

Student apathy

Communication channels

Organisation of section

Poor associates (different standards)

Japanese on campus

Lecturers and tutor quality and consistency

Department consistency

Education policies